Part One:
Student Materials

Course Schedule

Day 1

Module 1: Introduction

Module 2: Lead Safe Housing Rule

Module 3: Rehabilitation Planning

Lunch

Module 3: Rehabilitation Planning (Continued)

Module 4: Rehabilitation – Construction Phase

Day 2

Module 5: Refining Your Rehabilitation Program

Module 6: Homebuyer Programs

Lunch

Module 7: Tenant Based Rental Assistance Programs

Module 8: Special Needs Housing Programs

Module 9: Planning for Compliance

TABLE OF CONTENTS

Student Materials

Table of Contents

Each module listed below includes:

Module Overview
Copies of Overhead Slides
Exercise Worksheets

Module 1:
Introduction

Module 1

Introduction

Lead Based Paint Implementation Course

- Developed for HUD Office of Affordable Housing Programs
  - With active involvement of HUD Office of Healthy Homes and Lead Hazard Control
  - By ICF Consulting
- Builds on "Learning the Rules" regulatory course
- Who are we?
  - Program trainer
  - Technical trainer

Course Objectives

- Reinforce knowledge of Lead Safe Housing Rule
- Answer common questions
- Identify key compliance challenges
- Share ideas and strategies
- Provide tools and forms to make the process easier

Course Structure

- Three parts:
  - Introduction, Rehab, Other Activities
- Lots of exercises
- Course Manual
  - Part 1: Student Materials
    - ✓Exercises
    - ✓Copies of overheads
  - Part 2: Resources (Rule and Forms)
  - Part 3: Reference Manual Chapters 1-7

References to course materials will be in these boxes

Logistics

- Timing of breaks and lunch
- Telephones
- Restrooms
- Hey, where's the coffee??

Rules!!!!

- Ask questions
- Share techniques
- Sticky questions board
- Parking lot
- Training amnesty
- No cell phones that ring, please

Who's here?

- State Agencies
- Entitlement Cities
- Urban Counties
- Small Cities
- Public Housing Authorities
- Others?

Exercise 1-1: Getting to Know You...

- Introduce yourself to your table
- Read questions on Exercise 1-1
- Share your answers with the table
- Write down answers of others at your table
- You have ten minutes

Exercise 1-2: Lead Based Paint Hazards

- Answer questions with your group
- Answers are very short
- Be prepared to report out your answers
- You have five minutes

Use information in Reference Manual Chapter 2 to answer questions!

Exercise 1-2: Lead Based Paint Hazards

- Who is most at risk?
- How do people get poisoned?
- How do you know if someone has been poisoned?
- What are the effects of poisoning in adults?
- What are the effects of poisoning on children?
- What is a lead-based paint hazard?
- In what types of homes are hazards found?
- How are hazards addressed?

Wrap-Up

- What's next
  - Lead Requirements
  - Rehabilitation and other programs
- Any questions?

Exercise 1-1: Getting to Know You

Answer questions 1-7 for you and others at your table

Question	Answers of People at your Table						
	You						
1. How many units across all your programs are affected by the Lead Safe Housing Rule?							
2. How many risk assessments have you done?							
3. How many interim control jobs? (This counts paint stabilization done under TBRA or homebuyer programs)							
4. How many lead-based paint abatement jobs?							
5. How many lead-based paint trainings have you attended?							
6. How many of your staff have been trained in some way on lead-based paint?							
7. How many of your contractors have been trained in some way on lead-based paint?							

Record your answer to the following question on a yellow sticky:

8. What do you hope to learn in the next two days?

Exercise 1-2: Lead Based Paint Hazards

Directions:

Use information in Chapter 2 of the Reference Manual to answer these questions.

1. Who is most at risk of lead poisoning?

2. How do people get poisoned?

3. How do you know if someone has been poisoned?

4. What are the effects of lead poisoning in adults?

5. What are the effects of lead poisoning on children?

6. What is a lead-based paint hazard?

7. In what types of homes are hazards found?

8. How are hazards addressed?

Module 2:
Lead Safe Housing Rule

Module 2: Lead-Safe Housing Rule

Module Objectives:

Students will be able to:

- Explain the framework of the Lead-Safe Housing Rule
- Explain Lead Hazard Evaluation and Reduction Methods
- Explain exemptions to the Lead Safe Housing Rule
- Describe how to research State requirements

Module Overview:

	Topics covered
Review of requirements	➢ Purpose of the rule ➢ Activities and programs affected ➢ Enforcement, and ➢ Summary of the rule. ➢ Key resource: Attachment 3-A at the back of Chapter 3 in the Reference Section.
Notification	Requirements on notification
Exercise 2-1: Test Your Knowledge - Lead Hazard Evaluation	Describe the four methods of lead hazard evaluation/assessment discussed in this course, by matching colored cards to descriptions of each method. ➢ Each table will receive one laminated chart and a set of cards containing 4 different colors. ➢ Participants should work in small groups to place cards on a chart. ➢ Small groups share answers with larger group.
Exercise 2-2: Test Your Knowledge – Lead Hazard Reduction	This is a card exercise like the one in Exercise 2-1. The cards in this exercise describe lead hazard reduction activities. ➢ Each table should receive one laminated chart and a set of cards containing 6 different colors. ➢ Participants should work in small groups to place cards on the chart. ➢ Small groups share answers with larger group.
Ongoing Maintenance	Ongoing maintenance requirements
Exercise 2-3: Does the Lead-Safe Housing Rule Apply?	Participants work individually to identify whether a described situation is exempt or not, whether it is a special circumstance or not, and if yes, why. ➢ Participants work individually ➢ Share answers in large group
State Requirements	➢ Review state regulatory investigative tool. ➢ Key resource: Attachment 3-H at the back of Chapter 3 in the Reference Section.

Module 2: Lead Safe Housing Rule
List of Useful Resources

Resource	Where to Find It
1. 24 CFR Part 35	Appendix A
2. Interpretive Guidance	Appendix A
3. Lead Hazard Information Pamphlet	Form 1
4. Disclosure Forms	Forms 2 and 3
5. Lead Hazard Evaluation Notice	Form 10
6. Lead Hazard Presumption Notice	Form 11
7. Lead Hazard Reduction Notice	Form 23
8. Lead Safe Housing Requirements Screening Worksheet and Rehab Addendum	Forms 5 and 6
9. HUD/EPA Abatement Letter, April 2001	Reference Manual Chapter 3, Attachment 3-I
10. Guidance on HUD/EPA Abatement Letter of April 2001	Form 14
11. Researching Your State Requirements	Reference Manual Chapter 3, Attachment 3-H
12. Chapter 3: Lead-Based Paint Requirements	Reference Manual Chapter 3

Module 2

Lead-Safe Housing Rule
A Review

Objectives

You will be able to explain:

- The framework of the Lead-Safe Housing Rule
- Lead Hazard Evaluation and Reduction Methods
- Exemptions to the Lead Safe Housing Rule
- How to research State requirements

Your Resources

- Part 2 (Resources) -- Appendix A
  - Lead Safe Housing Rule
  - Interpretive Guidance
- Part 3 (Reference Manual) -- Chapter 3
  - Attachment 3-A (regulation summary)
  - Attachment 3-H (state reg investigative tool)

Purpose of the Rule

- To protect young children
- To control lead-based paint hazards in paint, dust, and soil
- Not:
  To abate intact lead-based paint

Activities Affected

- Rehabilitation
- Tenant-Based Rental Assistance
- Acquisition, Leasing, Support Services, and Operations

CPD Programs Affected

- HOME Investment Partnerships Program (HOME)
- Community Development Block Grant (CDBG)
- Emergency Shelter Grants (ESG)
- Housing Opportunities for Persons with AIDS (HOPWA)
- Shelter Plus Care (S+C)
- Supportive Housing Program (SHP)
- Youthbuild

Enforcement

- Failure to comply may lead to sanctions under the program providing assistance
- State and local law may render other penalties

Summary of Requirements Four Approaches

1. Do no harm
2. Identify and stabilize deteriorated paint
3. Identify and control lead hazards
4. Identify and abate lead hazards

Reference Manual Chapter 3
Attachment 3-B

Summary of Requirements Five Activities

- Notification
- Lead hazard evaluation
- Lead hazard reduction
- Ongoing maintenance
- EIBLL requirements

Reference Manual Chapter 3
Attachment 3-A

Notification Requirements

- Prior to leasing a unit:
  - Lead Hazard Information Pamphlet
  - Disclosure Form
- After lead hazard evaluation
  - Notice of Lead Hazard Evaluation
- After presuming lead-based paint and its hazards
  - Notice of Lead Hazard Presumption
- After conducting lead hazard reduction activities
  - Notice of Lead Hazard Reduction

Reference Manual
Chapter 3, Exhibit 3-6

Lead Hazard Evaluation

- Visual Assessment
- Paint Testing
- Paint Inspection
- Risk Assessment
  - Lead Hazard Screen

Exercise 2-1: Test Your Knowledge—Lead Hazard Evaluation

1. Prepare the game
   - Place gameboard on table
   - Pass out all the cards
2. Play the game
   - Place the cards in the correct spot on the gameboard
   - You have 5 minutes

Exercise 2-1: Questions

- **When is this method required?**
- **What does it identify?**
- **Who can do it?**
- **Is a notice required?**

See Reference Manual Chapter 3, Exhibit 3-7 and the Lead Safe Housing Rule (Appendix A)

Lead Hazard Assessment/ Evaluation: Resources

- Lead-Safe Housing Rule: 24 CFR 35.1320
- Interpretive Guidance: Subparts B and R
- Reference Section: Exhibit 3-7 on evaluation methods
- Visual Assessment Training: www.hud.gov/offices/lead/lbptraining.cfm

Lead Hazard Reduction

- Paint stabilization
- Interim controls
- Standard treatments
- Abatement

Exercise 2-2: Test Your Knowledge—Lead Hazard Reduction

1. Prepare the game
   - Place gameboard on table
   - Pass out all the cards
2. Play the game
   - Place the cards in the correct spot on the gameboard
   - You have **5 minutes**

Exercise 2-2: Questions

- **When is this method required?**
- **What does it achieve?**
- **Who can do it?**
- **Is a notice required?**
- **Are safe work practices required?**
- **Is clearance required?**

See Reference Manual Chapter 3, Exhibit 3-8 and the Lead Safe Housing Rule (Appendix A)

Lead Hazard Reduction: Resources

- Lead-Safe Housing Rule: 24 CFR 35.1330 and 35.1325
- Interpretive Guidance: Subparts B and R
- Reference Manual Chapter 3, Exhibit 3-8 (page 3-18)

Quick Quiz
Lead Hazard Reduction

- What is the difference between paint stabilization and paint repair?
- What are the four methods of abatement?
- When are safe work practices and clearance not required?
- Who conducts clearance?

Ongoing Maintenance

- Applies when relationship is ongoing
- Requires annual visual assessment
- Identified hazards must be fixed safely
- Ask tenants to notify owners of deteriorated paint
- Clearance is required
- Note: Reevaluation is required for interim controls

For EIBLL Requirements, wait for Module 7 (TBRA)

Exercise 2-3: Does the Lead-Safe Housing Rule Apply?

- Work individually
- Answer the questions
  - Is the unit exempt?
  - Does it qualify for a limited exception?
  - Why?
- You have 10 minutes

See Appendix A – 24 CFR 35.115(a)

Exemptions: Resources

- Exemptions from the Lead-Safe Housing Rule: 24 CFR 35.115, 35.165
- Limited exceptions from specific requirements:
  - De minimus (35.1350; Interpretive Guidance J7, J8, R17)
  - Elderly occupied unit (J24)
  - Unit listed on National Register of Historic Places (35.115)

Form 5 Lead Safe Housing Requirements Screening Worksheet

Researching Your State Regulations

- Get started: laws, people, other sources of information
- Answer 10 questions about your State's
  - Definitions
  - Evaluation/reduction requirements
  - Certification requirements
  - Other requirements

Reference Manual Chapter 3, Attachment 3-H

- Analyze the answers to see how it affects you

Wrap Up

- Covered the Lead Safe Housing Rule
  - Notices
  - Lead Hazard Evaluation
  - Lead Hazard Reduction
  - Ongoing Maintenance
  - EIBLL
  - Exemptions
- Next -- Apply it to rehab!

Exercise 2-1: Test Your Knowledge – Lead Hazard Evaluation

Use the blank chart and the colored cards provided to you. Place each card in its appropriate square.

Visual Assessment	**Paint Testing**
Lead-Based Paint Inspection	**Risk Assessment**

Exercise 2-2: Test Your Knowledge – Lead Hazard Reduction Methods

Use the blank chart and the colored cards provided to you. Place each card in its appropriate square.

Paint Stabilization	**Interim Controls**
Abatement	**Standard Treatments**

Exercise 2-3: Does the Lead-Safe Housing Rule Apply?

There are several circumstances when a property or a unit is exempt either from the Lead-Safe Housing Rule in its entirety or from portions of the Lead-Safe Housing Rule. Please determine if the following circumstances reflect exemptions under the Lead-Safe Housing Rule.

	Exempt?	Limited Exception?	Explain
Sample Question: Homeowner rehab project, 65 year-old woman lives in the unit.	*No*	*Yes*	*Eligible for relocation waiver [HUD interpretive guidance, Question J-24]*
1. A previous lead-based paint inspection in the Smith's house shows it has no lead-based paint.			
2. Unit is vacant and will remain vacant until demolished.			
3. Property is being used for a day care center.			
4. Tornado ripped a hole in the roof of the house.			
5. Furnace is broken in the middle of winter.			
6. Porch steps are broken. Someone could trip and break a leg.			
7. Job involves replacement of water heater and some roof repair. [no paint to be disturbed]			
8. Emergency rental assistance is provided to a family for three months to prevent their eviction.			
9. Transitional housing allows for residents to stay up to 90 days. The unit is then opened to another resident.			
10. Work will involve only 18 ft^2 on the exterior of the home.			
11. Unit is listed on the National Register of Historic Places.			
12. Rental unit occupied by elderly person.			

ANSWERS: Exercise 2-1: Test Your Knowledge – Lead Hazard Evaluation

Visual Assessment

ALSSO and TBRA

Deteriorated paint

Trained visual assessor

No notice required

Paint Testing

Rehab (≤$5k)

Lead-based paint

Certified lead-based paint inspector or risk assessor

Notice of Lead Hazard Evaluation

Lead-Based Paint Inspection

This activity is not required for programs covered under this training.

Lead-based paint

Certified lead-based paint inspector or risk assessor

Notice of Lead Hazard Evaluation

Risk Assessment

Rehab (>$5k)

Lead hazards

Certified risk assessor

Notice of Lead Hazard Evaluation

ANSWERS: Exercise 2-2: Test Your Knowledge – Lead Hazard Reduction Methods

Paint Stabilization

ALSSO and TBRA

Repairs paint and substrate

Trained or Supervised Worker

Notice of Lead Hazard Reduction Activity

Safe work practices

Clearance

Interim Controls

Rehab ($5k-$25k)

Controls identified lead hazards temporarily

Trained or Supervised Worker

Notice of Lead Hazard Reduction Activity

Safe work practices

Clearance

Abatement

Rehab (>$25k)

Controls identified lead-based paint and/or lead hazards permanently

Certified abatement workers supervised by a certified abatement supervisor

Notice of Lead Hazard Reduction Activity

Safe work practices

Clearance

Standard Treatments

Rehab ($5k-$25k)

Controls presumed lead hazards temporarily

Trained or Supervised Worker

Notice of Lead Hazard Reduction Activity

Safe work practices

Clearance

ANSWERS
Exercise 2-3: Does the Lead-Safe Housing Rule Apply?

There are several circumstances when a property or a unit is exempt either from the Lead-Safe Housing Rule in its entirety or from portions of the Lead-Safe Housing Rule. Please determine if the following circumstances reflect exemptions under the Lead-Safe Housing Rule.

	Exempt?	Limited Exception?	Explain
Sample Question: Homeowner rehab project, 65 year-old woman lives in the unit.	*No*	*Yes*	*Eligible for relocation waiver [HUD interpretive guidance, Question J-24]*
1. A previous lead-based paint inspection in the Smith's house shows it has no lead-based paint.	Yes		See 24 CFR 35.115(a)(4)
2. Unit is vacant and will remain vacant until demolished.	Yes		See 24 CFR 35.115(a)(6)
3. Property is being used for a day care center.	Yes		Not residential. See 24 CFR 35.115(7)
4. Tornado ripped a hole in the roof of the house.	Yes		Emergency – Property must be protected from further structural damage. See 24 CFR 35.115(a)(9)
5. Furnace is broken in the middle of winter.	Yes		Emergency – Imminent danger to human health. See 24 CFR 35.115(a)(9)
6. Porch steps are broken. Someone could trip and break a leg.	No	Maybe	No: Not an emergency. Does not need to be addressed imminently. Maybe: If the area to be repaired meets the de minimus standards, the activity does not require safe work practices or clearance.
7. Job involves replacement of water heater. [no paint to be disturbed]	Yes		No paint disturbed. See 24 CFR 35.115(a)(8)
8. Emergency rental assistance is provided to a family for three months to prevent their eviction.	Yes		Emergency rental assistance is exempt if it lasts less then 100 days. See 24 CFR 35.115(a)(11) and Interpretive Guidance #K6
9. Transition housing allows for residents to stay up to 90 days. The unit is then opened to another resident.	No	No	Does not qualify for 100-day exemption discussed above because the assistance is provided to the unit for longer than 100 days. See Interpretive Guidance #K6.
10. Work will involve only 18 ft^2 on the exterior of the home.	No	Yes	Work area is below de minimis for exterior work. Work is exempt from safe work practice and clearance requirements.
11. Unit is listed on the National Register of Historic Places.	No	Yes	Interim controls can be used instead of abatement to preserve the historic nature of the structure. See 24 CFR 35.115(a)(15)
12. Rental unit occupied by elderly person.	No	No	Unit must be designate specifically for the elderly to be exempt. See 24 CFR 35.115(a)(3)

Module 3:
Rehabilitation Planning

Module 3: Rehabilitation Planning

Module Objectives:
Students will be able to:

- Describe Lead Safe Housing Rules for rehabilitation projects
- Calculate the level of assistance to a project
- Describe changes to application forms and procedures
- Describe options for evaluation
- Describe how risk assessment results affect project planning
- List ways to keep residents informed about the process

Module Overview: The module is summarized below.

Introduction	• Review of Requirements • Calculating the Level of Assistance
Exercise 3-1 **Initial Work Write-Up and Cost Estimate**	Participants examine the work write-up for the Jones' home and work in small groups to answer questions.
Exercise 3-2 **Hiring a Risk Assessor**	Participants examine a sample RFP for Risk Assessor and answer questions as a large group about the content.
Exercise 3-3 **Reading the Risk Assessment Report**	Participants examine the RA Report for the Jones' home and work in small groups to answer questions.
Exercise 3-4 **Revising the Work Write-Up**	Participants review a completed work write-up and discuss.
Exercise 3-5 **Documenting Project Costs**	Participants examine a completed Lead Requirements Screening Worksheet – Rehab Addendum and discuss how the figures were calculated to determine the applicable lead hazard reduction requirements.
Exercise 3-6 **Contractor Qualifications**	Small groups work on exercise related to contractor qualifications.
Wrap up	• Informing the occupant • Documentation • Good resources

Module 3: Rehabilitation Planning
List of Useful Resources

Resource	Where to Find It
1. Rehabilitation Project Flowchart	Form 4
2. Calculating Level of Rehabilitation Assistance Worksheets	Form 7
3. Sample Homeowner's Manual	Form 8
4. Lead Safe Housing Requirements Screening Worksheet	Form 5
5. Lead Safe Housing Requirements Screening Worksheet -- Rehab Addendum	Form 6
6. Sample Lead Hazard Reduction Specifications	See www.centerforhealthyhousing.org and National Institute for Building Sciences
7. Risk Assessment Review Checklist	Form 53
8. Lead Hazard Evaluation Notice	Form 10
9. HUD/EPA Abatement Letter, April 2001	Reference Manual Chapter 3, Attachment 3-I
10. Guidance on HUD/EPA Abatement Letter of April 2001	Form 14
11. Property Owner's Service Agreement	Form 9
12. Lead Hazard Presumption Notice	Form 11
13. Sample Risk Assessment Report – Multifamily	Form 12
14. Elderly Waiver for Relocation	Form 13
15. Chapter 4: Addressing Lead-Based Paint in Rehabilitation Programs	Reference Manual Chapter 4

Module 3

Rehabilitation Planning

Rehab Planning Objectives

At the end of this module, students will be able to:

- Describe Lead Safe Housing Rules for rehabilitation projects
- Calculate the level of assistance to a project
- Describe options for evaluation
- Read a risk assessment report
- Describe how risk assessment results affect project planning

Lead Requirements for Rehab: An Overview

- 3 approaches, related to thresholds
  - – ≤ $5000, $5000 - $25,000, Over $25,000
- Each involves
  - – Notification
  - – Evaluation
  - – Reduction
  - – Ongoing Maintenance (HOME rental only)

See Form 4: Rehab Flowchart

Calculating the Level of Assistance

- Level of Assistance determined by **dual threshold**

  Lesser of:
  - Federal Assistance or
  - Rehab Hard Costs
    - ✓no soft costs
    - ✓no lead hazard reduction costs
- See Calculation Worksheets (Form 7)

Calculating the Level of Assistance Example 1

- A single family home is rehabilitated for **$6,000** (hard costs).
- The owner is receiving a **$2000** low interest loan from the city's HOME Program.
- The level of assistance is _____

Calculating the Level of Assistance Example 2

A family is purchasing a home and receiving **$10,000** in assistance for downpayment, closing costs, and rehab costs.

- The hard costs of rehabilitation are **$6,000**.
- The level of assistance is _____.

Calculating the Level of Assistance Multifamily Units

A/NU + B/TU

A = Rehab hard costs for assisted units
B = Rehab hard costs for common areas
NU = Number of assisted units in project
TU = Total Units in project

Calculating the Level of Assistance Example 3: Multifamily

A 20-unit property is doing **$100,000** in rehabilitation

- The rehab will include **$40,000** in hard costs for repairs to exterior and common areas
- And **$60,000** in hard costs for 10 HOME-assisted units
- The per unit hard costs are _____

Rehabilitation Planning Exercise Overview

- Writing a work write-up
- Obtaining a risk assessment
- Revising the work write-up
- Communicating with the homeowner

Wrap Up: Informing the Homeowner

- What should you tell the homeowner?
- Some useful resources:
  - Lead Hazard Information Pamphlet (Form 1)
  - Homeowner Handbook (Form 8)
  - Homeowner Service Agreement (Form 9)
  - Notice of Lead Hazard Evaluation (Form 10)

Wrap Up: Documentation

- Lead Safe Housing Requirements Screening Sheet
  - Part 1 (Form 5)
  - Part 2 (Form 6)
- Risk Assessment Report
- Notice of Lead Hazard Evaluation
- Final Work Write-up

Wrap-Up Other Useful Resources

- See front of module for references to
  - Level of assistance calculation (Form 7)
  - Sample specifications
  - Guidance on HUD/EPA abatement letter (Form 14)
  - Risk assessment review checklist (Form 53)
- *Next up -- Construction Phase*

Exercise 3-1: Initial Work Write-Up and Cost Estimate

The Jones family has applied to the Town of Coolsville's Homeowner Rehabilitation Program. Bruce Smith, the Rehabilitation Specialist, visits the Jones' home and develops a work write-up for the job. Review his work write-up and answer the questions below. The work write-up for the Jones' home is provided as **Exhibit A** to this module.

Questions:

1. What is the initial cost estimate?

2. What lead hazard evaluation is required? Why?

3. Which surfaces require paint testing?

4. Suppose the City of Coolsville has adopted a strategy of presuming lead hazards instead of doing risk assessments. What specific measures will be required on the building components we know about? What other measures will be needed? Why?

Work in small groups to answer the questions above.
Write your answers in the space provided.
You have **5 minutes**.

Exercise 3-2: Hiring a Risk Assessor

In fact, Coolsville does risk assessments on all jobs over $5,000. Upon completion of the work write-up, Bruce sends out a Request for Proposals (RFP) to the Risk Assessors on their building list. Review the RFP provided as **Exhibit B** to this module.

Questions: Answer the questions below and indicate where you found the information.

1. What type of information is provided about the property in the RFP?

2. What does the RFP say about where the Risk Assessor must test for lead-based paint?

3. What types of hazards must be identified?

4. What must be included in the risk assessment report?

5. What information must be provided on Hazard Control Options?

6. Is there anything that surprises you about this RFP?

Work in small groups to answer the questions above.
Write your answers in the space provided.
You have **10 minutes**.

Exercise 3-3: Reading the Risk Assessment Report

The Risk Assessor conducts a risk assessment of the Jones' home. The resulting risk assessment report is attached. Review the Jones' risk assessment report and answer the questions below. The risk assessment report is provided as **Exhibit C** to this module.

Questions:

Helpful hint: Read the questions first. Then look in the report for the answers.

1. What lead hazards are in the Jones' unit? Where did you find this information?

2. Notice that the Risk Assessment has both interim controls as well as abatement options. Why did the Risk Assessor provide both options?

3. Which options – interim controls or abatement -- does Bruce Smith need to follow? Why?

4. Based on these risk assessment results, what items would you change or add to the work write-up?

5. Do you have any questions about this Risk Assessment Report?

Work in small groups to answer the questions above.
Write your answers in the space provided.
You have **10 minutes**.

Exercise 3-4: Updating the Work Write-Up

Based on the risk assessment results, Bruce revised his work write-up for the Jones' home.
See **Exhibit D** at the end of this module.

1. Are all the hazards identified in the risk assessment addressed by these new specs? How?

2. What are the total costs of the lead hazard reduction work? How did you calculate them?

3. What lead hazard reduction methods did Bruce choose when developing these specs?

4. Would you do anything differently?

5. Is there anything that surprises you about this work-write-up?

Work in small groups to answer the questions above.
Write your answers in the space provided.
You have **10 minutes**.

Exercise 3-5: Documenting Project Costs

Bruce completed his Lead Safe Housing Requirements Screening Sheet and confirms that the level of assistance for this project is still in $5000 - $25,000 category. See the completed form below. In completing it, he takes into account:

- The HOME funds received by the project of $15,000. The project received no other assistance.
- His hard costs of rehab.

Questions:

1. How did Bruce calculate the Federal Assistance?

2. How did he calculate the hard costs of rehab?

LEAD HAZARD REQUIREMENTS SCREENING WORKSHEET
Addendum for Rehabilitation Projects *(See Form 6 in this Manual)*

Part 3: Per Unit Level of Rehabilitation Assistance

A. Average Federal Funding Per Unit	$ 15,000
B. Average Per Unit Rehabilitation Hard Costs (not including costs of lead hazard evaluation and reduction)	$ 10,092
C. Lower of A or B	$ 10,092

Part 4: Approach Required (Based on answer to 3.C., above)

$0 – $5,000	_____ Do No Harm (Test & Repair)
$5,001 - $25,000	___✓___ Identify and Control Lead Hazards
$25,001 and above	_____ Identify and Abate Lead Hazards

Calculated by Bruce Smith 10/19/01
Date

I have evaluated the site, the specifications, estimated the rehab hard costs and interviewed the occupants. In my professional opinion, this project meets the above requirement for federal lead hazard reduction under 24 CFR Part 35.

Bruce Smith 10/19/01
Signature Date

Exercise 3-6: Contractor Qualifications

Now that he has finalized his work write-up, Bruce is almost ready to bid the work. He reviews the work write-up to confirm the types of contractors he will need.

1. Based on this final scope of work, what type of workers does the contractor need to have? Why?

2. Suppose Bruce had decided that as part of his lead hazard reduction measures, he would do window replacement instead of stabilizing them. Would it change the workers who are needed to do the work?

3. Now suppose Bruce had included window replacement in his initial work-write up as a weatherization measure. How does this change the scenario?

Resources: See the HUD/EPA Abatement Letter (Attachment 3-I in the reference section of this manuals) and Form 14, Guidance on the HUD/EPA Abatement Letter.

Work in small groups to answer the questions above.
Write your answers in the space provided.
You have **10 minutes**.

This Work Write Up was developed for a fictional property. All specification language and costs are for discussion purposes only.

Work Item List Cover Sheet

Property Address123 Olympic Street

Owners: Susan and Bill Jones

Phone No: (111) 222-3333

Original Cost Estimate completed by: Bruce Smith Date: October 4, 2001

Total Initial Estimate: $10,092.55

Modifications completed by: _____ Date: _____

Total Final Estimate: $_____

Explanation for Modifications:

Date Bids Sent To Contractors:_____

Bid Opening Date:_____

Bids Returned by:	Amount
1. _____	_____
2. _____	_____
3. _____	_____

Rehab Specialist:_____

Witnessed by:_____

Owner's Acceptance: _____ Date:_____

WORK WRITE-UP FOR
123 OLYMPIC STREET
COOLSVILLE, ANY STATE 12345

PREPARED BY: Bruce Smith
DATE: OCTOBER 4, 2001

SPECIFICATIONS BY LOCATION

Spec Number	Spec	Quantity	Units	Unit Price	Total Price
	GENERAL REQUIREMENTS				
0031.1	CONSTRUCTION DEFINITIONS "Install" means to purchase, set up, test and warrant a new component. "Replace" means to remove and dispose of original material, purchase new material, deliver, install, test and warrant. "Repair" means to return a building component to like new condition through replacement, adjustment and recoating of parts. "Reinstall" means to remove, clean, store and install a component.	1.00	GR	0.00	0.00
0035.1	VERIFY QUANTITIES/MEASUREMENTS All measurements (i.e. SF of Drywall, or those provided with drawings) are for the contractor's convenience prior to a mandatory site inspection to verify all dimensions. All quantities (i.e. number of window units) are as stated. No claim for additional funds due to discrepancies in measurements or quantities shall be honored if not submitted at the time of the initial proposal.	1.00	GR	0.00	0.00
0039.1	HVAC PERMIT REQUIRED Prior to the start of the heating/cooling work, the contractor shall create a heating distribution layout and perform heat/cooling loss calculations and all other documentation needed to apply for, pay for and receive an HVAC permit on behalf of the owner.	1.00	EA	0.00	0.00

0077.1	NEW MATERIALS REQUIRED All materials used in connection with this work write-up are to be new, of first quality and without defects – unless stated otherwise or pre-approved by Owner and Construction Specialist.	1.00	GR	0.00	0.00
0090.1	1 YEAR GENERAL WARRANTY Contractor shall remedy any defect due to faulty material or workmanship and pay for all damage to other work resulting therefrom, which appear within one year from final payment. Further, contractor shall furnish owner with all manufacturers' and suppliers' written warranties covering items furnished under this contract prior to the release of the final payment.	1.00	DU	0.00	0.00
	EXTERIOR				
3185.1	FRONT DOOR – PREHUNG METAL ENTRANCE Dispose of door and frame. Install a prehung metal, insulated, 4-panel entrance door and jamb including interior and exterior casing, spring metal weatherstripping, interlocking threshold, wide angle peepsight, one entrance and one mortised deadbolt keyed alike. Prime and top coat.	1.00	EA	410.00	410.00
	ROOFING				
4580.1	TEAR OFF AND REROOF SHINGLES Remove and dispose of all roofing & defective sheathing. Cut a 1" wide vent at ridge board. Replace up to 5 sf of sheathing per 100 sf of roof using pine board or CDX plywood of matching thickness. Staple 15 lb felt. Install preformed aluminum, drip edge, and vent pipe boots. Install a 220 lb fiberglass asphalt, 3 tab shingle with a 25 year warranty. Replace all flashing. Install shingle-over ridge vent.	12	SQ	145.00	1,740.00
4755.1	REPAIR FASCIA 1" X 6" Install a 1" x 6", #2 pine fascia with bevel cut joints using galvanized finish nails. Caulk over joints, and prime.	1	LF	4.60	4.60

	PORCH					
5685.1	PREP & PAINT PORCH Scrape all loose, peeling, cracked, blistered paint from porch, including floor, railing, ceiling, posts and trim. Feather edges and dull gloss by sanding. Rinse entire area with water. Let dry. Caulk all cracks. Spot prime and top coat with owner's choice of premixed acrylic latex.	375		SF	0.69	258.75
3525.1	GUARD RAIL – WOOD Dispose of any existing railing. Construct a preservative treated pine railing using 2" x 4" top and bottom rails, and 2" x 2" balusters face nailed 6" on center. Create a 3'6" high railing between 4" x 4" end posts.	24		LF	15.00	360.00
3585.1	TREAD REPLACEMENT – EXTERIOR Dispose of damaged tread. Install 1-5/8" preservative treated pine stepping stock with screw shank nails.	3		EA	22.00	66.00
3875.1	HOUSE NUMBER SET Install 3" high metal or PVC house numbers on a 1" x 4" pine backer board painted with 2 coats of exterior white latex paint on siding to the right of the door.	1		EA	42.00	42.00
	FURNACE ROOM					
6050.1	FURNACE & DUCT – GAS: 80,000 BTU Install 80,000 BTU intermit. pilot, forced air furnace complete with plenum, insulated supply duct, galvanized return duct connected to wall registers, to service all rooms. Include setback thermostat, filter, fan and plenum control. Connect thimble breaching to chimney per code. Provide separate power circuit & operating manual. System to maintain 70 F indoor temp when outside temp is –10 F. Min AFUE rating of 86.	1		EA	4,210.00	4,210.00
5210.1	DRYWALL – PATCH – LARGE	36	SF	5.00	180.00	

	Cut back defective gypsum to expose half of the studs on each side of the hole. Cut and tightly fit drywall patch. Glue and nail or screw patch. Apply tape and 3 coats of compound feathered out at least 8". Wet sand ready for paint.				
	KITCHEN				
7595.1	RECEPTACLE – GFCI COUNTERTOP Install a flush mounted, ground fault circuit interrupted, ivory, duplex receptacle and ivory cover plate using #14 copper romex. Fish wire and repair all tear out.	3	EA	90.00	270.00
7835.1	RANGE HOOD EXTERIOR VENTED Install an exterior ducted enameled range hood with integral controls and light capable of 100 cfm at 70 somes. Attach hood cabinet with screws. Include metal vent and roof or wall cap/damper assembly, using #14 copper romex. Owner's choice of color.	1	EA	265.00	265.00
5490.1	PREP & PAINT WALLS – SEMI-GLOSS Remove/cover hardware, fixtures, accessories not to be painted. Scrape loose, peeling, cracked and blistered areas. Clean oil, grease, fungus, dirt and dust from surfaces. Fill holes and cracks. Prime all new materials and spot prime existing with acrylic latex primer. Top coat with owner's choice of premixed acrylic latex. Replace or uncover hardware, fixtures and accessories.	520	SF	0.52	270.40
	BATH				
4150.1	TUB END WALL Frame a 2" x 4" wide partition at tub end for full ceiling height. Provide blocking for a showerhead fitting and a 2' x 2' access panel. Hang water resistant drywall, tape and finish with 3 coats of compound. Use metal corner bead around access panel opening. Make stops for access panel and use 4 round-headed screws to install panel of 1/2" BCX plywood with smooth, sanded edges.	1	EA	218.00	218.00

3680.1	TUB SURROUND – PREFAB Install a white fiberglass or acrylic, 3 or 5 piece tub surround kit with a built-in soap dish. Caulk all joints with white, mildew resistant, siliconized caulk. Prepare substrate and attach panels using manufacturer's recommended adhesive and fasteners.	1	EA	265.00	265.00
5560.1	PREP & PAINT BATHROOM WALLS Remove/cover all hardware and fixtures not to be painted. Wet scrape all loose cracked, peeling, blistered surfaces. Clean surfaces with household detergent. Fill all holes and cracks. Spot prime with acrylic latex. Apply top coat of owner's choice of premixed acrylic latex semi-gloss.	1	RM	100.00	100.00
5930.1	UNDERLAY AND VINYL TILE Install 5/16" underlayment grade plywood using 7d screw shank or cement coated nails, 6" on center allowing a 1/4" gap at wall. Lay 12" x12"x1/8" vinyl composition tile, color group B as made by Armstrong or Azrock, per manufacturer's recommendations. Square to room axis. Include metal edge strips at openings, and shoe molding or 4" vinyl base around perimeter. Owner's choice of in-stock color.	36	SF	2.95	106.20
6945.1	BATHTUB – 5' STEEL COMPLETE Install a 5' white, enameled, formed steel, tub complete with lever operated pop up drain and overflow, PVC waste, molded base, metal two handle shower diverter, shower rod and Delta 6122 shower head.	1	EA	575.00	575.00
	SOUTHWEST BEDROOM				
3260.1	REWORK INTERIOR DOOR - ENTRANCE DOOR Rehang door. Adjust door and lockset to operate properly. If door rubs carpeting, trim bottom of door to clear carpeting.	1	EA	45.00	45.00

5495.1	PREP & PAINT INTERIOR TRIM Remove or cover hardware/surfaces not to be painted. Wet scrape loose, cracked, peeling and blistered paint from all trim including doors, sash, and radiators. Feather edges and dull gloss with wet sanding. Clean oil, grease, dirt and dust from trim. Fill holes and caulk cracks. Spot prime. Apply one top coat of acrylic latex enamel. Finish type and color choice of owner.	1	RM	58.00	58.00
	MASTER BEDROOM				
4010.1	CLOSET POLE Field measure and install 1-1/2" diameter wood closet pole and sockets.	1	EA	24.00	24.00
4015.1	CLOSET SHELF Install 1" x 12" closet shelf of #2 grade pine or B/C plywood, from wall to wall, supported on three sides by hood strip. If more than 4' span, use center support bracket. If plywood, fill all cracks, holes and front edge cuts with putty, and sand smooth.	3	LF	6.00	18.00
2410.1	BASEBOARD – 1" X 4" Install 1" x 4", #2 grade pine base with finish nails or tee headed brads.	56	LF	2.10	117.60
5235.1	LAMINATE 3/8" DRYWALL – WALLS & CEILING Hang 3/8" gypsum over wall or ceiling surface with screws 8" on center and a bead of construction adhesive 20" on center. Butt drywall to door and window casing and apply J channel molding. Remove top molding from 3-piece base and reinstall after surface is paint-ready. Tape, 3-coat finish and sand ready for paint.	560	SF	1.25	700.00
5565.1	PREP & PAINT BEDROOM Remove/cover all hardware, fixtures not to be painted. Wet scrape loose, cracked, peeling, blistered surfaces. Feather edges and dull gloss surfaces with sandpaper. Clean all surfaces with	1	EA	150.00	150.00

household detergent. Spot prime and top coat trim, ceiling, walls, doors and windows with owner's choice of premixed acrylic latex. Include any closets.

PRE-REHABILITATION RISK ASSESSMENT
Request For Proposal (RFP)
Memo Cover Sheet

To:
From:
Date:
RE:

The City of Coolsville is accepting bids to perform a risk assessment for 1234 Main Street. Please find attached the Request for Proposal and information on the dwelling unit.

Please note that in order for the City to consider your bid to perform a risk assessment for this property, the proposal must include all items listed in the RFP. All submitted reports and documents must meet stated requirements.

Sealed bids must include technical and cost information and be submitted to Bruce Smith by 5 pm October 14, at 25 Glory Road, Coolsville, State, 12345. Any questions regarding this RFP should be directed to Bruce Smith, Rehab Specialist at (555) 333-2222.

Risk Assessment Proposal Requirements

1. Background. The purpose of this Request for Proposal (RFP) is to provide the Housing Agency ("Agency") and property owners with information to help them manage and control lead-based paint hazards efficiently and effectively during rehabilitation activities, with particular attention to the requirements of the rule on federally-owned and assisted housing (24 CFR 35). This RFP is a request for a pre-rehabilitation risk assessment (or paint testing of surfaces to be disturbed, if applicable; collectively "evaluations"). Attached is the following information on the property to be evaluated, as applicable:

    a. Property Name
    b. Property Address
    c. Number of Buildings, if available
    d. Number of Units
    e. Building Address(es), if available
    f. Name of Owner
    g. Owner's Address
    h. Name of Owner's Management Agent
    i. Address of Owner's Management Agent
    j. Building Construction
    k. Year of Construction
    l. A listing of all painted surfaces to be disturbed during the planned renovation. This list includes all interior and exterior surfaces of the dwelling, all common areas, if present, and all outbuildings and fences.

    a. Personnel. All work must be performed by firms certified to perform risk assessments and by individuals certified and/or licensed to perform risk assessments by the State (or EPA, if applicable) where the services are to be provided. If an X-ray fluorescence (XRF) instrument is used, all risk assessors must possess current training, certification and licensing in the use of the XRF equipment under appropriate federal, state or local authority. The Agency reserves the right to restrict the assignment of any individual, for any reasonable cause, as a risk assessor under the contract or any subcontracts.

    b. Scope of Work. The Contractor shall provide all necessary facilities, materials, supplies, equipment, supervision, and personnel and other items and services to perform the lead evaluation services as defined in this RFP. These services must be in accordance with applicable work practice standards of the state (or EPA, if applicable) where the services are provided. When more than one regulatory provision applies to a condition or activity, the most stringent shall be used. Applicable regulations are those that are in force when and where the lead evaluation is conducted, including, but not limited to:

U.S. Department of Housing and Urban Development (HUD): 24 CFR 35
U.S. Occupational Safety and Health Administration: 29 CFR 1926
U.S. Environmental Protection Agency (EPA): 40 CFR 745
State regulations
Local regulations

c. Lead-Based Paint Hazards. The purposes of the risk assessment are: 1) to identify conditions that may result in adverse human health effects from the following sources: deteriorated lead-based paint (LBP), interior dust-lead hazards, soil lead hazards, chewable surfaces, friction surfaces and impact surfaces, as defined by HUD and EPA; 2) to test paint on surfaces that will be disturbed during the renovation.

d. The Risk Assessment Process. The risk assessment shall include the following activities: occupant interviews, testing for lead content of all coatings on surfaces to be disturbed during the renovation, lead hazard identification of deteriorated paint, friction, impact and chewable surfaces, and dust and soil sampling. The risk assessment shall be completed within _____ days of the approval to begin work. The report must be submitted ____ days after completion of field work. Invoices will not be paid until the complete report is received and accepted by the Agency.

6. Interviewing Occupants and Owner. The risk assessor shall acquire whatever signed permission releases are needed to enter the dwelling and conduct the lead risk assessment. The risk assessor shall use the resident questionnaire from the HUD Guidelines and shall, at a minimum, collect the following information: age of the building, identify the numbers of occupants and their ages, with specific note being made of children under age six, women of childbearing age and other persons to be considered at risk from the hazards of lead. The risk assessor should interview the owner, if possible, to identify occupant use patterns and past and proposed maintenance and renovation activities.

7. Laboratory Requirements. All laboratories selected for use in the lead-based paint hazards and evaluation reports shall hold all accreditations, certifications and recognitions needed to conduct lead testing services as governed by regulatory agencies having jurisdiction over such work. At a minimum, the laboratory used by the contractor shall be recognized by the U.S. Environmental Protection Agency (EPA) National Lead Laboratory Accreditation Program (NLLAP) for the analyses performed under this contract, and shall, for work under this contract, use the same analytical method used for obtaining the most recent NLLAP recognition. Copies of certificates shall be provided with the offeror's bid submittal.

8. Identification of Lead-Based Paint. The risk assessor shall sample all components/surfaces to be disturbed during the renovation, as well as any surface that is deteriorated or hazardous. If a component is not to be disturbed and is not a hazard, it should not be sampled for lead content. Identification of LBP may be done by either XRF testing or by collecting samples of paint followed by laboratory analysis.

a. Portable XRF Testing. Any portable X-ray fluorescence (XRF) instrument used to test for lead in paint shall have a valid XRF Performance Characteristic Sheet (PCS). Any portable XRF instrument used shall be used in accordance with its XRF PCS. [**Optional:** The requirements of American Society for Testing and Materials standard PS 95 Standard Provisional Practice for Quality Systems for Conducting In Situ Measurements of Lead Content in Paint or Other Coatings Using Field-Portable X-Ray Fluorescence (XRF) Devices, shall be used.]

b. Paint Sample Collection Specifications. Lead determination of coatings not applicable for X-ray fluorescence (XRF) testing (highly curved, ornate or restricted space locations) shall be tested by sample collection followed by laboratory analysis. For collected paint samples, the contractor shall insure that all area dimensions are collected and recorded in inches (or centimeters) to the nearest $1/16^{th}$ of an inch. [**Optional:** The requirements of American Society for Testing and Materials Standard E 1729 Standard Practice for Field Collection of Dried Paint Samples for Lead Determination by Atomic Spectrometry Techniques, or its HUD-approved equivalent, shall be used for paint sample collection.] For each submitted sample, the contractor shall provide the laboratory with the collection dimensions in inches (or centimeters) to the nearest $1/16^{th}$ of an inch, and obtain the results from the laboratory required for reporting. Areas from which samples are collected must be repaired after samples are collected (e.g., fill void created by sample collection and prime paint area.)

c. Component Sampling within each Room or Area.

   i. Windows. When testing windows, at a minimum, the following window surfaces shall be tested: Exterior sash, jamb, casing and trough; Interior sash, casing and sill.

   ii. Doors. When testing doors, at a minimum, the following surfaces shall be tested: jamb, both sides of the door itself and door casing.

   iii. Component Sampling Locations. All testing shall include the following identification items: the room or area, component or portion of component tested, exact location of each component tested and the substrate. For example, Living Room/upper window sash/second window from wall B/wood. Substrates shall be identified as one of the following types: brick, concrete, drywall, metal, plaster, or wood. Other substrate types shall be assigned the closest among the designated types based on density, porosity, and other physical factors, with the report annotated with the actual substrate type.

d. Wallpaper shall be assumed to cover paint and shall be tested.

e. The risk assessor shall regard parts of the building components as separate testing combinations if visual indication or evidence exists that the different parts have separate and/or distinct painting histories.

9. Identification of Dust Lead Hazards, Friction, Impact and Chewable Surfaces and Dust Wipe Sampling. The risk assessment shall include identification of all lead hazards as defined by HUD and EPA. Dust sampling will be performed in accordance with the work practice standards of the state (or EPA, if applicable) in which the services are performed and in rooms where the greatest potential risk is expected. [**Optional:** The requirements of American Society for Testing and Materials Standard E 1728, Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination By Atomic Spectrometry Techniques.] Dust samples shall be collected from floors and sills in all sampled living areas. The exact locations of each dust sample collected and each hazard identified shall be clearly identified. The presence of a dust-lead hazard in a dwelling unit or common area must be determined by comparing the hazard standard to the weighted arithmetic mean of all single-surface and composite dust sub-samples taken from the same component type in a dwelling unit or common area. Quality control samples must be taken and submitted for analysis with samples from each structure.

10. Identification of Soil Lead Hazards and Sampling of Areas of Bare Soil. Soil samples shall be taken any time the risk assessor identifies bare soil. Risk assessor must collect a minimum of two samples from play and non-play areas, with the option of an additional composite sample from the drip line/perimeter of the building. The risk assessor shall separately identify children's play areas and non-play areas, if applicable. [**Optional:** Soil samples shall be collected in accordance with the requirements of ASTM Standard E-1727, Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques.]

11. Hazard Control Options. All hazard control options provided by the risk assessor must be technically feasible and specifically suited to the identified surface(s) or hazard. The control options must take into account the surfaces to be disturbed during the renovation, the condition of the property and the location and severity of hazards. Rough cost estimates shall be provided for all hazard control options. Risk assessors shall be advised that hazard control options provided by the risk assessors will be evaluated in the context of the Agency's requirements under the Lead Safe Housing Rule (24 CFR Part 35). [**Optional:** For projects where the amount of federal rehabilitation assistance is $5,000-$25,000, the Agency is required only to perform interim controls. For projects where the amount of federal rehabilitation assistance exceeds $25,000, the Agency is required to abate all identified lead hazards (not all LBP).] Each hazard control option must be clearly identified as either being either interim control or abatement, according to applicable State, and/or HUD/EPA requirements. If abatement is performed, firms must be certified/licensed, in accordance with State and/or EPA requirements. (**Optional:** The risk assessor must also identify the type of training and/or certification/licensing necessary in the State where the services are provided for each person performing any lead hazard control option.)

12. Minimum Report Requirements. The risk assessment report shall comply with the minimum requirements established by the state (or EPA) where the services are provided. The risk assessment report shall contain at least the following:

    a. Notice of Evaluation Results. Completed copy of Notice of Evaluation Results suitable for distribution by the agency to the occupants.

    b. Summary of Risk Assessment. An executive summary written in simple and easy-to-understand English describing the on-site investigation conducted and the results. The summary must be in the basic format found at 24 CFR Part 35, Appendix B and include the names of all risk assessors performing services, the date the site was visited and samples collected. The summary must include all identified lead-based paint and/or lead-based paint hazards and their locations. In addition, it must include all treatment options for each hazard identified, clearly identified as either being either interim control or abatement.

       If paint testing is performed, the summary will include the information found at 24 CFR Part 35, Appendix A. It will also contain a list of all surfaces tested, with the unique test identification number (ID) for each testing combination and the results, the location description of the testing combination where any XRF measurement or paint sample was collected, the XRF and/or laboratory analysis measurement value with units of measure, i.e., for paint, mg/sq.cm, and the lead classification result for the surface as positive or negative.

    c. Data Collected. The risk assessor shall provide all interview questionnaires, sampling forms and field notes, all XRF results, raw data, analytical laboratory results, and all miscellaneous photographs or documents relating to the on-site visit, assessments and all paint, dust and soil samples collected.

    d. List of all surfaces tested and/or sampled.

    e. Identification of all lead-based paint and/or LBP hazards with sufficient detail to permit replication of sampling and/or testing effort.

    f. Sketches or drawings of property with floor plan detailing all sample locations.

    If the report is not clearly written and understood by the Agency, the Agency reserves the right to request clarifications and revisions by the risk assessor, at no additional cost to the agency.

13. Required Submittals. To be considered responsive, each bid must include technical and cost proposals, as well as copies of the following documents:

    a. Copies of firm's certification to perform risk assessments of this site.
    b. Copies of risk assessor's State/EPA certification/license.

c. Documentation of successful completion of XRF manufacturer's training for each individual performing risk assessment services.
d. Copy of analytical laboratory EPA recognition (e.g. NLLAP or ELLAP), and licensing, if applicable.
e. Copy of risk assessment firm's radiation safety license or registration issued by the State where services are to be provided, or the U.S. Nuclear Regulatory Commission.
f. Risk assessors shall have prior experience performing risk assessment projects and shall submit three references documenting past experience by providing: name, agency and contact telephone number.
g. Current resume (1-2 pages) for each risk assessor proposed to be used. At a minimum, this shall include a listing of the relevant certifications (with document numbers and effective dates), licenses, training, and experience for persons providing risk assessment services.

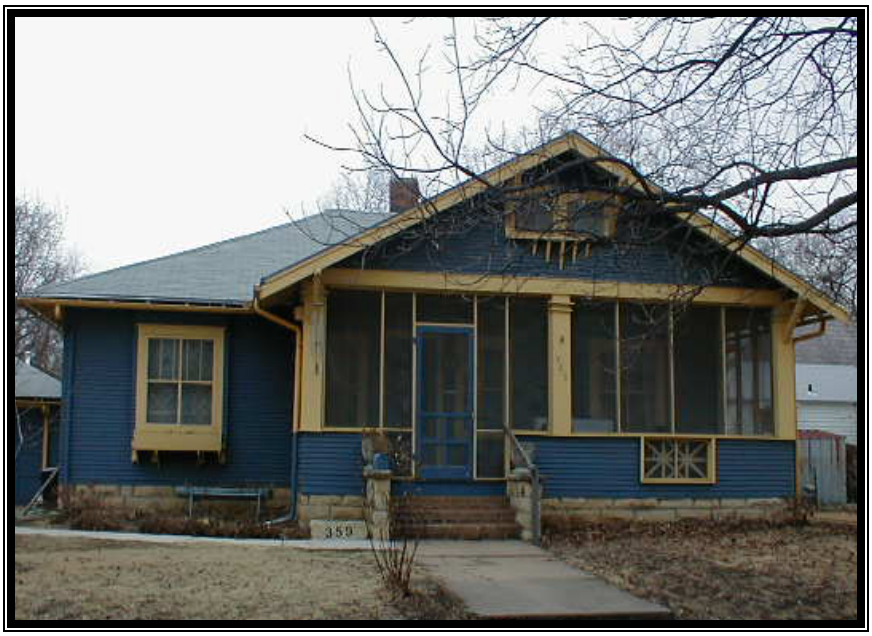
14. [**Optional:** Unit Prices]

Unit prices for the following services shall be including in the proposal. If requested by the Agency, risk assessors shall provide additional services at the unit costs submitted:

a. Site visit following Agency's receipt of risk assessment report
b. Additional paint, soil and dust sampling
c. Additional paint testing

ABC Environmental

LEAD HAZARD RISK ASSESSMENT & LIMITED LEAD-BASED PAINT TESTING REPORT



PERFORMED AT:

Private Residence (William Jones, Occupant)
123 Olympic Street
Coolsville, Anystate 12345

PREPARED FOR:

Mr. Bruce Smith
City of Coolsville
25 Glory Road
Coolsville, Anystate 12345
(555) 333-2222

PREPARED BY:

ABC Environmental
State Certification #00-0000
Susan McGee, KS00-011110
Massachusetts Street
Suite #2
Poolsville, Anystate 12346-2868
TEL: 000-541-0220
FAX: 000-541-0457
Project No.: XXXXX

This sample risk assessment report was prepared by Richard Baker of Baker Environmental Services, Lenexa, KS.

TABLE OF CONTENTS

ENVIRONMENTAL CONSULTANT:
ABC ENVIRONMENTAL

PROJECT CONTACT: _____

Name Date

EXECUTIVE SUMMARY

As a result of the Lead Hazard Risk Assessment and the limited Lead-Based Paint Testing (Assessment) conducted on 2/14/02, it was found that lead-based surface coatings (paint) and lead hazards were present on the subject property as of the date of the Assessment. The analytical results from this Assessment effort identified the following lead-based paint (LBP) and Lead hazards, as defined by EPA and/or HUD standards:

LBP

- Paint on All painted Exterior Components of the house, including the front porch

Existing Lead-Based Paint Hazards and Potential Lead Hazards

The following areas are coated with Lead-Based Paint (LBP) that is *deteriorated* and currently present existing lead-based paint hazards. All component substrates are wood.

- All exterior windows (windows are in fair condition)
- Roof fascia of house
- SW Bedroom door and door casing

A dust hazard was identified on the bathroom floor.

No soil lead hazards were identified.

The following areas are coated with LBP that is *intact* and that do not currently present lead hazards. However, the upcoming renovation plans include work inside the house and scraping and repainting the exterior. If these renovations occur, lead-safe work practices will need to be implemented during the project to ensure that lead hazards are not created.

- LBP on the exterior siding
- Front door and casing
- All exterior roof fascia and trim
- LBP on all front porch components (floor, columns, frame, railing, door)
- Bathroom wall
- Kitchen wall

The planned renovation includes disturbance of the following components that do not contain lead-based paint:

- Floors that were tested throughout the house
- Interior doors that were tested (except SW Bedroom)
- Interior walls in bedrooms and living room

Please remember that all identified LBP and Lead Hazards should always be properly addressed by professionally trained, experienced, and/or licensed lead workers.

Following is a report of the information collected during this Assessment:

IDENTIFYING INFORMATION

A Lead Hazard Risk Assessment and Limited LBP Testing (Assessment) was conducted at 1234 Main Street, in Coolsville, Anystate for Mr. Bruce Smith on 2/14/02. The Assessment was conducted by Susan McGee, a Certified Risk Assessor (Anystate License # KS00-011110). The purpose of the Assessment was to identify the presence of lead hazards on and/or in a limited number of surfaces inside and outside the residence, as well as to identify the presence of deteriorated lead-based paint (LBP) and LBP that may be disturbed during planned renovations. The City of Coolsville is providing funds from the U.S. Department of Housing and Urban Development to perform a remodeling project at this home. This Assessment was also completed to help the City and the homeowner determine if any of the upcoming HUD-funded renovation activities have the potential to create additional lead hazards. Based upon conversations with the Owner and the City of Coolsville Housing Agency (Client), to the knowledge of this Assessor, there has not been any previous LBP testing at this home.

As part of the Assessment, a visual survey of the property and structure was conducted, dust wipe sampling was performed on a limited number of interior surfaces, and composite soil samples were collected. In addition, limited on-site paint testing using an x-ray fluorescence (XRF) lead-in-paint analyzer was performed.

The Assessment was contracted for by Mr. Bruce Smith, City of Coolsville, Coolsville, Anystate 12345, (123) 456-7891. Further information concerning this project can be obtained from this contracting agency. The results of the limited assessment are summarized below.

IDENTIFIED LEAD HAZARDS

While the building and its paint was generally in good condition during the Assessment, the XRF results from the deteriorated paint that was tested showed that LBP hazards exist, as defined in the Residential LBP Hazard Reduction Act of 1992 (Title X) and as defined by the Environmental Protection Agency (EPA) regulation published in the January 5, 2001 Federal Register. The XRF results indicate that lead levels above EPA and/or US Department of Housing and Urban Development (HUD) criteria exist in the following locations:

Existing Lead Hazards

The following areas are coated with Lead-Based Paint (LBP) that is *deteriorated* and currently present existing lead-based paint hazards. All component substrates are wood.

1. All exterior windows (windows are in fair condition)
2. Roof fascia of house
3. SW Bedroom door and casing

Potential Lead Hazards

1. LBP is present on the exterior siding
2. LBP is present on the front door and casing
3. LBP is present on all exterior roof fascia and trim.
4. LBP is present on all front porch components.
5. LBP is present on bathroom and kitchen walls

A listing of environmental sampling locations and their associated lead contamination levels can be found in the sections addressing the analytical laboratory results for paint, dust, and soil.

Hazard control options and associated cost estimates for the areas or components identified with LBP or lead hazards are also discussed later in this report. In an effort to aid in the interpretation of the listed findings a glossary of terms and a list of publications and resources addressing lead hazards and their health effects is included at the end of this report.

ONGOING MONITORING

Ongoing monitoring is necessary in all dwellings in which LBP is known or assumed to be present. At these dwellings, the very real potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure. Ongoing monitoring typically includes two different activities: re-evaluation and annual visual surveys. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual surveys by the Client, which should be conducted at least once a year. Client conducted visual surveys do not replace the need for professional re-evaluations. Visual surveys should confirm that all Paint with known or suspected LBP are not deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known, assumed or suspected LBP. The partial table below is taken from **Table 6.1, Standard Re-evaluation Schedules,** as found in the HUD publication entitled; ***Guidelines for the Evaluation and Control of LBP Hazards in Housing,*** dated June 1995, with September 1997 revisions. It is intended as a guideline for the Client to assess the condition of areas where hazard control activities occurred.

Factors at this residence require the use of Ongoing Monitoring Schedule item number three (3), to dictate monitoring protocol. Visual surveys by the Client should occur on at least a yearly basis for all painted surfaces. All surfaces that have undergone the hazard control strategy of Interim Controls, Encapsulation or Enclosure should also be checked during this survey. If components are replaced (windows), no re-evaluation or visual survey would be needed, since the LBP would have been removed with the old windows. Please refer to your community development agency, housing authority, or other applicable agency for additional local/regional regulations and guidelines governing re-evaluation activities.

Standard Re-evaluation Schedule

Schedule	Original Evaluation Results	Action taken	Re-evaluation Frequency & Duration	Visual Survey Schedule
3	The average of leaded dust levels on all floors, interior windows, or window troughs sampled exceeds the applicable standard, but by less than a factor of 10.	A. Interim controls or a mixture of interim controls and abatement (not including window replacement). B. Mixture of interim controls and abatement plus replacement of all windows with lead hazards. C. Abatement of all lead-	1-2 Years. 3 Years. 4 Years.	Annually and whenever information indicates a possible problem except for encapsulants. The first visual survey of encapsulants should be done one month after clearance; the second should be done 6 months later and annually thereafter.

		based paint hazards, but not all lead-based paint. D. Abatement of all lead-based paint using encapsulation or enclosure. E. Removal of all lead-based paint.	None. None.	None.

DISCLOSURE REGULATIONS

A copy of this complete report must be made available to new lessees (tenants) and/or must be provided to purchasers of this property under Federal law before they become obligated under any future lease or sales contract transactions (Section 1018 of Title X – found in 24 CFR Part 35 and 40 CFR Part 745), until the demolition of this property. Landlords (Lessors) and/or sellers are also required to distribute an educational pamphlet developed by the EPA entitled ***"Protect Your Family From Lead in Your Home"*** and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from LBP hazards.

FUTURE REMODELING PRECAUTIONS

It should be noted that during this Assessment, a limited number of areas were tested for the presence of LBP. All LBP, dust, and soil hazards that were identified are addressed in this report. However, LBP, dust lead hazards, and/or soil lead hazards may be present at other locations of the property. Additional paint testing should precede any future remodeling activities that occur at any untested areas. Additional dust and/or soil sample collection and analysis should follow any hazard control activity, repair, remodeling, or renovation effort, and any other work efforts that may in any way disturb LBP and/or any lead containing materials. These Assessment activities will help the Client and owner to ensure the health and safety of the occupants and the neighborhood. Details concerning lead safe work techniques and approved hazard control methods can be found in the HUD publication entitled: ***"Guidelines for the Evaluation and Control of LBP Hazards in Housing"*** (June 1995 & 1997 Revision).

CONDITIONS & LIMITATIONS

Staff of ABC Environmental. has performed the Client requested tasks listed above in a thorough and professional manner consistent with commonly accepted standard industry practices, using state of the art practices and best available known technology, as of the date of the assessment. ABC Environmental cannot guarantee and does not warrant that this Assessment/Limited LBP Testing has identified all adverse environmental factors and/or conditions affecting the subject property on the date of the Assessment. ABC Environmental cannot and will not warrant that the Assessment/Limited Testing that was requested by the client will satisfy the dictates of, or provide a legal defense in connection with, any environmental laws or regulations. It is the responsibility of the client to know and abide by all applicable laws, regulations, and standards.

The results reported and conclusions reached by ABC Environmental are solely for the benefit of the client. The results and opinions in this report, based solely upon the conditions found on the property as of the date of the Assessment, will be valid only as of the date of the Assessment. ABC Environmental assumes no obligation to advise the client of any changes in any real or potential lead hazards at this residence that may or may not be later brought to our attention. Further conditions and limitations to this contracted report are included in the general terms and conditions supplied to the client with the contract for services.

SITE INFORMATION AND FIELD TESTING

RESIDENT QUESTIONNAIRE

A resident questionnaire was completed as part of the Assessment, to help the Client identify particular use patterns, which may be associated with potential LBP hazards, such as opening and closing windows painted with LBP. The answers to the questionnaire were obtained during an interview with the occupants, Mr. and Mrs. Homeowner. Following is a summary of the information obtained during that interview:

Children in the Household:	2 (Ages 1, 3)
Children's bedroom locations:	SW bedroom
Children's eating locations:	Kitchen
Primary interior play area(s):	Living Room
Primary exterior play area(s):	Back Yard; on and near play equipment
Toy Storage:	NA
Pets:	2 cats (indoor)
Children's blood lead testing history:	NA
Observed chewed surfaces:	NA
Women of child bearing age:	1
Previous lead testing:	None
Most frequently used entrances:	Front door
Most frequently opened windows:	Kitchen and Living Room
Structure cooling method:	Central Air Conditioning
Gardening – type and location(s):	Previous vegetable garden (in back yard)
Plans for landscaping:	None
Cleaning regiment:	Weekly
Cleaning methods:	Mopping, sweeping, dusting, vacuuming
Recently completed renovations:	None recent
Demolition debris on site:	None
Resident(s) work in lead industry:	None
Planned renovations:	A preliminary Scope of Work document for this residence was supplied prior to the onset of the Assessment. A copy of that document is included in Appendix E of this report. The planned renovation is through the City of Coolsville program. A complete list of pending renovation activities can be obtained from Mr. Bruce Smith, City of Coolsville, Anystate.

BUILDING CONDITIONS SURVEY

Date of Construction:	1937
Apparent Building Use:	Residential
Setting:	Residential
Front Entry Faces:	East
Design:	Bungalow
Construction Type:	Wood framed, wood shingles

Lot Type:	Slight slope, drains to the east
Roof:	Fair (curled shingles), no apparent roof leaks
Foundation:	Good, no known basement leaks or visible foundation cracks
Front Lawn Condition:	Approx. 10% bare soil
Back Lawn Condition:	Aprox. 20% bare soil; existence of play structure
Drip Line Condition:	Some Paint chips along the driplines
Site Evaluation:	Very good
Exterior Structural Condition:	Exterior structural is good and paint condition is fair.
Interior Structural Condition:	Excellent
Overall Building/Site Condition:	Very Good

PAINT CONDITION SURVEY

Please Note: EPA and HUD have provided a specific definition for the term "deteriorated paint." Deteriorated paint is defined as "any interior or exterior paint or other coating that is peeling, chipping, chalking or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate." This definition is most typically associated with surface conditions only. Usage of this term in describing conditions other than those associated with surface coatings are not known to be defined by EPA or HUD.

IDENTIFIED DETERIORATED PAINT, PAINT CONDITIONS, LEAD CONTENT, & MOST APPARENT CAUSE OF DETERIORATION:

- Paint on the exterior windows, portions of porch and fascia are peeling over wood. Testing in these areas revealed lead levels above HUD standards. Moisture and age are the most likely causes of the damage.

The remaining paint exhibited no apparent signs of deterioration, as of the date of the Assessment.

PAINT SAMPLING AND TESTING

Limited LBP Testing, conforming with HUD Guidelines 24 CFR 35 Section 35.930 (c), (d) [**Optional:** and the requirements of American Society of Testing and Materials (ASTM) standard PS 95-98, Standard Provisional Practice for Quality Systems for Conducting In Situ Measurements of Lead Content in Paint or Other Coatings Using Field-Portable X-Ray Fluorescence (XRF) Devices] was accomplished at this residence on surfaces found to have deteriorated paint and/or where it was indicated to the Assessor that planned renovation would occur. No paint chip samples were taken. On 2/14/02, a total of 23 tests (assays) were taken at a limited number of specified surfaces on the inside and outside of the residence using an x-ray fluorescence analyzer. Deteriorated paint and areas that were specified to be disturbed during the planned renovation project were tested. Lead concentrations that meet or exceed the HUD published levels identified as being potentially dangerous (e. g., greater than or equal to 1.0 milligrams per centimeter square [$\geq$ 1.0 mg/cm^2]) were encountered on the exterior siding and trim, the exterior window components and trim, and all front porch components.

Some of the remaining test locations exhibited lead-in-paint levels below the HUD levels, but in great enough quantities to be detectable by our XRF analyzer. It should be noted that lead concentrations (in paint) that are less than the levels that identify a surface coating as LBP still have the potential of causing lead poisoning. Should these or any potential LBP painted components and/or surfaces be disturbed in any manner that generates dust, extreme care must be taken to limit its spread. **It should be assumed that any and all painted surfaces, components, or surfaces not requested to be tested as part of this investigation, or any previous investigations, are coated with LBP, and that renovation or repair activities in these areas dictate the use of safe work practices that limit dust generation and area contamination.**

Testing was performed by Susan McGee, a State of Anystate certified Risk Assessor, using the Radiation Monitoring Device (RMD) LPA-1 X-ray Fluorescence analyzer (S/N 12934, State of Anystate license #XX-XXXX). Please refer to the appendices for the detailed XRF, dust and soil sampling analytical reports.

INTERIOR DUST SAMPLING

A total of 6 single surface dust wipe samples were collected in an effort to help to determine the levels of lead-containing dust on the interior windowsills and floors. These samples were collected from areas most likely to be lead contaminated if lead-in-dust is present. These samples were collected in accordance with the requirements of ASTM Standard E-1728, Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques. EPA, HUD and State of Anystate regulations define the following as dangerous levels for lead dust in residences: floors – $\geq$40 μg/ft^2 (micrograms per square foot); interior windowsills – $\geq$250 μg/ft^2; and, interior window troughs – $\geq$400 μg/ft^2. Please refer to ***Appendix B – Dust Wipe Analytical Results*** for the laboratory reports and to ***Appendix I – Lead and Lead Safety Information and Resources*** for a list of publications and resources addressing lead hazards and their health effects; both are located at the end of this report. As indicated below, **dangerous levels of leaded dust, as defined by HUD, was detected in one sample. This sample was obtained from the bathroom floor and constitutes a dust-lead hazard in that room.**

	Type	Location	Component	Sample Size (ft^2)	Sample Location	Test Results ($\mu g/ft^2$)
1	Dust Wipe	Bathroom	Floor	1.00	Floor, Center of room.	80.0
2	Dust Wipe	Living Room	Sill	0.66	Wood, Wall A, sill.	41.1
3	Dust Wipe	Kitchen	Floor	1.00	Carpet, Center of room.	<20.0
4	Dust Wipe	Kitchen	Sill	0.50	Wood, Wall D, sill.	<40.0
5	Dust Wipe	Master Bedroom	Floor	1.00	Carpet, Center of room.	<20.0
6	Dust Wipe	Master Bedroom	Sill	0.74	Wood, Wall C, sill	<27.0

Laboratory Information:

Anytown Laboratories	2222 West Street Anytown, Anystate 00000 (800) 234-5678
Dust Wipe Analysis Protocol:	EPA Method SW846, 7420, implementing a microwave-assisted digestion process.
Dust Wipe medium used:	Lead-Wipes, ASTM # E1792-96a
National Lead Laboratory Accreditation Program Serial number:	#XXXXXX

SOIL SAMPLING AND LABORATORY INFORMATION

Two (2) composite soil samples were collected at this residence in accordance with the requirements of ASTM Standard E-1727, Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques. A Composite sample is a sample containing soil from a stated number of locations mixed together to form a Composite sample. The first sample consisted of soil from four locations in the front yard flower garden at 1' on center (O.C.). The second sample was collected from four separate locations in the B (south) sideyard at 1' O.C.. The samples were collected from bare soil areas only. The analytical results did not identify lead concentrations at or above the levels that EPA and HUD identifies as dangerous. See the following table for a summary of the soil sampling results. Please refer to ***Appendix C – Soil Sample Analytical Data*** for the detailed analytical reports. Testing data in **bold face** indicates lead levels at or above the EPA Dangerous Levels of Lead regulations that were published on January 5, 2001.

	Type	Location	Comments	Test Results (µg/g)
7	Composite	Front flower garden	Bare Soil sample	990
8	Composite	Backyard under play equipment – play area	Bare Soil sample	260

Laboratory Information:

Anytown Laboratories	2222 West Street Anytown, Anystate 00000 (800) 234-5678
Soil Analysis Protocol:	EPA Method SW846, 7420, implementing a microwave-assisted digestion process.
National Lead Laboratory Accreditation Program Serial number:	#XXXXXX

LEAD HAZARD CONTROL OPTIONS AND COST ESTIMATES

Lead-safe work practices and worker/occupant protection practices complying with current EPA, HUD and OSHA standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered Lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards, or even creating hazards that were not present before. All persons and/or firms performing lead hazard control activities must have received proper training in Lead-Safe Work Practices and/or Lead Abatement. Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication entitled: ***Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision)*** published by the HUD, as well as in the Occupational Safety and Health Administration (OSHA) regulations found in 29 CFR, Part 1926.62, known as the OSHA Lead Exposure in Construction Industry Standard.

The associated cost estimates, unless otherwise noted, include the labor and materials to accomplish the stated activity and most additional funds typically found to be necessary to complete worker protection, site containment, and cleanup procedures. These are approximate estimates only and due to a variety of potential factors, may not accurately reflect all local cost factors. A precise estimate must be obtained from a certified LBP abatement contractor or a contractor trained in lead safe work practices. Properly trained and/or licensed persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

Interim controls, as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These activities include, but are not limited to: component and/or substrate repairs; paint and varnish repairs; the removal of dust-lead hazards; renovation; remodeling; maintenance; temporary containment; placement of seed, sod or other forms of vegetation over bare soil areas; the placement of at least 6 inches of an appropriate mulch material over an impervious material, laid on top of bare soil areas; the tilling of bare soil areas; extensive and specialized cleaning; and, ongoing LBP maintenance activities.

Abatement, as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of twenty (20) years, or these methods must have a design life of at least twenty (20) years. These activities include, but are not necessarily limited to: the removal of LBP from substrates and components; the replacement of components or fixtures with lead containing materials and/or lead containing paint; the permanent enclosure of LBP with construction materials; the encapsulation of LBP with approved products; the removal or permanent covering (concrete or asphalt) of soil-lead hazards; and, extensive and specialized cleaning activities.

SPECIAL CLEANING PRECEDING LEAD HAZARD CONTROL ACTIVITIES

a) Before any lead hazard control activities begin, the structure and site must be inspected and pre-cleaned following HUD specified cleaning protocols, as detailed in the Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision), published by the U.S. Department of Housing and Urban Development. Some of the required steps include removing large debris and paint chips followed by HEPA vacuuming of all horizontal surfaces (floors, windowsills, troughs, etc.). The cleaning protocols described in this publication can assist the contractor in doing a preliminary cleaning and improving the chances of passing clearance

inspections after remediation.

HAZARD 1: Scraping LBP on the exterior siding and trim

a) INTERIM CONTROLS - STABILIZATION: A lead hazard could be created if the exterior siding is prepared for repainting (scraped) during the upcoming renovations. Any work that will disturb these surfaces must be carried out by properly trained lead workers, following lead-safe work practices. Following preparation work, the lead-based paint coatings on the exterior siding and trim may be addressed by stabilizing the surfaces with new paint. This activity has the potential to create a high volume of lead-contaminated dust, and extra care must be taken by the contractor to limit and contain the dust generated.

Stabilization	$XX/S.F.

b) ABATEMENT - ENCLOSURE: Another safe and effective method of remediation in this area would be enclosing all exterior siding and trim with vinyl siding and pre-finished aluminum wrap materials. Caulk should be used to seal the bottom of the siding to the house and prevent leaded dust from falling through to the ground. This method usually generates smaller amounts of lead contaminated dust than does scraping and re-painting, and would permanently enclose the surfaces, eliminating future hazards. Even though the potential for leaded dust contamination is generally less with this method of remediation, special attention to work practices will be necessary to limit dust generation.

Siding/Trim Enclosure (per square foot)	$XX/S.F.

HAZARD 2: Scraping LBP on all exterior window components and trim

a) INTERIM CONTROLS - STABILIZATION: A lead hazard could be created if the exterior window components and trim is prepared for repainting (scraped) during the upcoming renovations. Any work that will disturb these surfaces must be carried out by properly trained lead workers, following lead-safe work practices. Following preparation work, the lead-based paint coatings on the exterior window components and trim may be addressed by stabilizing the surfaces with new paint. This activity has the potential to create a high volume of lead-contaminated dust, and extra care must be taken by the contractor to limit and contain the dust generated.

Stabilization	$XX/S.F.

b) ABATEMENT - REPLACEMENT: Installation of replacement windows is another possible remediation option. This involves removing the exterior window components and installing new replacement windows. This activity has the potential to create a high volume of lead-contaminated dust. All windows must be sealed off from the inside of the house during the duration of the work and extra care must be taken by the contractor to limit and contain the dust generated.

Removal of exterior window components and installation of replacement windows.	$XXX/ea.

HAZARD 3: Scraping LBP on all painted front porch components (floor, columns, frame, door)

a) INTERIM CONTROLS - STABILIZATION: A lead hazard could be created if the front porch components are prepared for repainting (scraped) during the upcoming renovations. Any work that will disturb these surfaces must be carried out by properly trained lead workers, following lead-safe work practices. Following preparation work, the lead-based paint coatings on the front porch components may be addressed by stabilizing the surfaces with new paint. This activity has the potential to create a high volume of lead-contaminated dust, and extra care must be taken by the

contractor to limit and contain the dust generated.

Stabilization – Per Square Foot $XXX/S.F.

b) ABATEMENT - REPLACEMENT: The removal and replacement of all of the porch components is another possible option for lead hazard control. This remediation option has the potential to generate extremely high amounts of lead contaminated dust and would require extensive containment.

Replacement of all porch components $XXX- $XXX

HAZARD 4: Removal of bathroom floor dust-lead hazard

a) INTERIM CONTROLS – REMOVAL OF DUST LEAD HAZARD AND STABILIZATION: An existing dust-lead hazard on the bathroom floor must be removed prior to any other rehabilitation activities in this room. This room must be carefully inspected and cleaned following HUD-specified cleaning protocols. As the area is prepared for replacement of the plumbing fixtures and repainting, lead-safe work practices must be used. All of the required procedures for control and containment of dust to this room must be used. Any work that will disturb these surfaces must be carried out by properly trained lead workers. Following preparation work, the lead-based paint coatings on the bathroom walls may be addressed by stabilizing the surfaces with new paint. This activity has the potential to create a high volume of lead-contaminated dust, and extra care must be taken by the contractor to limit and contain the dust generated.

Removal of leaded dust and Stabilization of bathroom walls $XXX/S.F.

b) ABATEMENT - REPLACEMENT: The removal and replacement of all of the bathroom walls components is another possible option for lead hazard control. This remediation option has the potential to generate extremely high amounts of lead contaminated dust and would require extensive containment. Abatement would normally not be the most feasible or cost-effective approach for this room, but remains an option.

Replacement of painted components in bathroom $XXXX

SPECIAL CLEANING FOLLOWING LEAD HAZARD CONTROL ACTIVITIES

a) Following all lead hazard control activities, the structure and site must be inspected and cleaned following HUD indicated cleaning protocols, as detailed in the Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision), published by the U.S. Department of Housing and Urban Development. The cleaning protocols described in this publication can assist the contractor in thoroughly, properly and safely cleaning the site.

Interim Control – Follow all lead-safe work practice procedures to reduce dust lead content to less than acceptable clearance level (40 micrograms per square foot for floors). Cleaning must be accomplished following the HUD indicated cleaning protocols, as detailed in the Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision), published by the U.S. Department of Housing and Urban Development. The cleaning protocols described in this publication can assist the contractor in thoroughly, properly and safely cleaning the site.

ADDITIONAL NOTES:

Clean up of the remediated areas should be accomplished on an ongoing basis throughout all activities that impact or disturb any known or assumed lead containing materials (LCM) and Paint. When a material, surface

coating, substrate, component, or surface is to be impacted as a result of any activity and the lead content is not known, those areas and/or items should be assumed to contain lead-based paint. Accumulation of debris is not recommended, and all plastic drop cloths must be replaced and disposed of properly each day. All trash must be promptly and properly removed from the site and the area left clean and as close to original condition as possible. Following the HUD guidelines will help increase the chances of attaining HUD and State of Anystate lead-in-dust clearance levels.

Please remember that lead testing occurred at a limited number of locations in the structure; LBP and/or LCM could still be present in the unit at areas not tested as part of this Lead Hazard Risk Assessment. Great care should be taken by the Client and Contractor if, at a later date, any repair, maintenance, remodeling or renovation activities disturb any paint where the concentrations of lead are not known. In lieu of any additional testing, all surfaces and Paint should be assumed to contain lead-based paint.

APPENDIX A
XRF LEAD-BASED PAINT TESTING RESULTS

APPENDIX A - XRF ANALYTICAL SAMPLING RESULTS FOR 1234 MAIN STREET, COOLSVILLE, ANYSTATE 12345

2/14/02

Reading Number	Location [1]	Side	Structure	Feature	Condition	Substrate	Color	Result	Lead (mg/cm2)
1	LR	A	Wall	Interior	Good	Drywall	White	NEG	0.5
2	Back Porch	D	Exterior Door	Interior side	Good	Wood	White	NEG	0.6
3	Front Porch	A	Column	Exterior	Fair	Wood	Tan	POS	6.7
4	Front Porch	A	Railing		Fair	Wood	Tan	POS	6.7
5	Front Porch	A	Ceiling		Fair	Wood	Tan	POS	6.7
6	Front Porch	A	Wall		Fair	Wood	Tan	POS	6.7
7	Front Porch	A	Posts		Fair	Wood	Tan	POS	6.7
8	Front Porch	A	Stairs	Treads	Fair	Wood	Tan	POS	6.7
9	DR-exterior	A	Window	Sash	Fair	Wood	Tan	POS	11.8
10	Exterior	A	Window	Casing	Fair	Wood	Tan	POS	5.4
11	Exterior	D	Wall	Siding	Good	Wood	Green	POS	8.5
12	Exterior	B	Wall	Siding	Good	Wood	Green	POS	5.3
13	Front Porch	A	Floor		Good	Concrete	Gray	POS	2.6
14	Front Door	A	Exterior side	Door	Poor	Wood	White	POS	1.9
15	Front Door	A	Casing	Casing	Poor	Wood	White	POS	1.9
16	Bathroom	B	Wall		Fair	Drywall	Blue	POS	9.1
17	Bathroom	B	Wall	Baseboard	Good	Wood	Blue	NEG	0.1
18	Bathroom	B	Wall	Shoemldng	Good	Wood	Blue	NEG	0.1
19	Mstr Bdrm	Center	Floor		Good	Wood	Brown	NEG	0.3
20	Mstr Bdrm	Center	Wall		Good	Drywall	White	NEG	0.2
21	Mstr Bdrm	Center	Wall	Baseboard	Good	Wood	White	NEG	0.2
22	Mstr Bdrm	Center	Wall	Top Moldng	Good	Wood	White	NEG	0.1
23	Mstr Bdrm	Center	Ceiling		Good	Drywall	White	NEG	0.1
24	Mstr Bdrm	B	Door		Good	Wood	White	NEG	0.1
25	SW Bdrm	A	Door		Good	Wood	White	POS	5.2
26	SW Bdrm	A	Door	Casing	Good	Wood	White	POS	9.5
27	SW Bdrm	B	Wall		Good	Drywall	Blue	NEG	0.8
28	SW Bedroom	B	Trim		Good	Wood	Blue	NEG	0.5
29	Kitchen	C	Exterior Door	Door - interior side	Good	Wood	White	NEG	0.3
30	Kitchen	D	Wall	Interior-next to refrig.	Good	Drywall	Yellow	POS	4.1
31	Back Prch	D	Wall	Interior	Good	Wood	White	NEG	0.7
32	Back Prch	B	Wall	Interior	Good	Drywall	White	NEG	0.3
33	Front Porch	A	Trim	Exterior SE corner	Good	Wood	Tan	POS	4.9
34	Exterior	A	Trim	Fascia-NE edge	Good	Wood	Tan	POS	4.7
35	Exterior	C	Wall	Siding	Good	Wood	Green	POS	2.8
36	Dining Room		Floor		Good	Wood	Brown	NEG	0.3

C-1	Calibration Verify	NIST Lead Paint Film Standard, 1.0 + .1, (Red NIST Film)						1.0
C-2	Calibration Verify	NIST Lead Paint Film Standard, 1.0 + .1, (Red NIST Film)						1.1
C-3	Calibration Verify	NIST Lead Paint Film Standard, 1.0 + .1, (Red NIST Film)						0.9
	1 See Sketch in Appendix A							

Performed by ABC Environmental, 920 Massachusetts Avenue, Poolsville, Anystate 12346-2868,

APPENDIX B
DUST WIPE SAMPLE ANALYTICAL DATA

ANYTOWN LABORATORIES

INCORPORATED

2222 West Street
Anytown, Anystate 00000 (555) 234-5678 · 800-ANY-LABS · (Fax) 111-2468

Excellence in Customer Service and Technology

AIHA/ELLAP 100100, NVLAP 0000, CAELAP 1111, RRLAP 1010

LABORATORY ANALYSIS REPORT

Lead Analysis by EPA 3050B/7420 Method

CLIENT #: ABC-123
CLIENT: ABC Environmental
ADDRESS: 7941 Westgate Street
Poolsville, Anystate 12346-2636
PO #: N/A

DATE COLLECTED: 2/14/02
DATE RECEIVED: 2/15/02
DATE ANALYZED: 2/15/92
DATE REPORTED: 2/15/02
SAMPLE TYPE: Wipe

PROJECT NAME: City of Coolsville
JOB LOCATION: 1234 Main Street, Coolsville, Anystate 12345

ALI Sample No	Client Sample No.	Sample Description	Sample Area (ft^2)	Dilution Factor	Total Lead (ug)*	Lead Concentration (ug/ft^2)
021559	1234-1	Bathroom floor-center	1.0	1	80.0	80.0
021560	1234-2	Living Rm Sill	.66	1	41.1	41.1
021561	1234-3	Kitchen Floor	1.00	1	<20.0	<20.0
021562	1234-4	Kitchen D Sill	1.00	1	<40.0	<40.0
021563	1234-5	Mstr Bdrm Floor	1.00	1	<20.0	<20.0
021564	1234-6	Mstr Bdrm Sill	0.74	1	<27.0	<27.0

QC – 18081	10.0 ppm Calibration Std			1,012.3	101.2%
QC – 18081	200 ug spike			210.7	105.4%
QC – 18081	5.0 ppm Calibration Std			521.7	104.4%
QC – 18081	Blank			<20.0	
QC – 18081	NIST 2710 Standard			569.7	103.0%

JUDITH JUNE

ANALYST: Judith June

Matthew Monday, CIH

Total No. of Pages in Report: 1 REVIEWED BY: Matthew Monday, CIH, Dept. Head

*Minimum Reporting Limit: 20 ug Total Lead. Effective 3/6/01, EPA Lead Hazard Standards: 40 ug/ft^2 for floors and 250 ug/ft^2 for interior window sills, 400 ug/ft^2 for window troughs. Industrial projects may have limits established per project. *For true values, assume two (2) significant figures.*

APPENDIX C
SOIL SAMPLE ANALYTICAL DATA

ANYTOWN LABORATORIES

INCORPORATED

2222 West Street
Anytown, Anystate 00000 (555) 234-5678 · 800-ANY-LABS · (Fax) 111-2468

Excellence in Customer Service and Technology

AIHA/ELLAP 100100, NVLAP 0000, CAELAP 1111, RRLAP 1010

LABORATORY ANALYSIS REPORT

Lead Analysis by EPA 3050B/7420 Method

CLIENT #: ABC-123
CLIENT: ABC Environmental
ADDRESS: 7941 Westgate Street
Poolsville, Anystate 12346-2636
PO #: N/A

DATE COLLECTED: 2/14/02
DATE RECEIVED: 2/15/02
DATE ANALYZED: 2/15/92
DATE REPORTED: 2/15/02
SAMPLE TYPE: Soil

PROJECT NAME: City of Coolsville
JOB LOCATION: 1234 Main Street, Coolsville, Anystate 12345

ALI Sample No	Client Sample No.	Sample Description	Sample Wt (mg)	Dilution Factor	Total Lead (ug)*	Lead Concentration (% by wt)	Lead Conc (ppm)
021565	1234-S1	Front Flower Garden	1,580	1	990	.067	670
021566	1234-S2	Backyard-under play equipment	1,275	1	560	.045	450

QC – 14669	10.0 ppm Calibration Std		967.2	96.7%	
QC – 14669	200 ug spike		196.0	98.0%	
QC – 14669	5.0 ppm Calibration Std		503.8	100.8%	
QC – 14669	Blank		>20.0		
QC – 14669	NIST 2710 Standard		541.8	97.9%	

William W. Webster

ANALYST: William W. Webster

Total No. of Pages in Report: 1

Matthew Monday, CIH

REVIEWED BY: Matthew Monday, CIH, Dept. Head

*Minimum Reporting Limit: 20 ug Total Lead. Effective 3/6/01, EPA Lead Hazard Standards: 40 ug/ft^2 for floors and 250 ug/ft^2 for interior window sills, 400 ug/ft^2 for window troughs. Industrial projects may have limits established per project. *For true values, assume two (2) significant figures.*

APPENDIX D
SITE AND FLOOR PLAN

Insert site and floor plans here indicating the locations of XRF testing, soil lead and dust lead sampling performed at this property.

APPENDIX E
SCOPE OF RENOVATION WORK, AS PROVIDED TO ASSESSOR

If applicable, insert governing authority's supplied scope of planned renovation work on this page and all additional pages necessary.

APPENDIX F
COPY OF RISK ASSESSOR'S LICENSE/CERTIFICATION

Insert copy of State/EPA Risk Assessor license/certification here.

APPENDIX G
COPY OF FIRM'S LEAD ACTIVITY LICENSE/CERTIFICATION

Insert copy of firm's lead activity license/certification here.

APPENDIX H
COPY OF XRF TRAINING CERTIFICATE AND LPA-1 PERFORMANCE CHARACTERISTICS SHEET

Insert copy of XRF training certificate here.

Insert PCS sheet here.

APPENDIX I
ADDITIONAL LEAD AND LEAD SAFETY RESOURCE DATA

"LEAD SPEAK" A BRIEF GLOSSARY

COMMON LBP TERMS

LBP: Any and all paint that contains at least 1 milligram of lead per square centimeter of surface area (1.0 mg/cm^2). This is infrequently expressed as 0.5% lead by weight and/or 5000 parts per million lead concentrations by dry weight.

LBP Hazards: Housing conditions that cause human exposure to unsafe levels of lead from paint. These conditions include, but are not necessarily limited to: deteriorated lead-based paint; friction, impact, or chewable surfaces; lead-contaminated dust; or, lead-contaminated soil.

Paint: Any and all paints, stains, varnishes, shellacs, epoxies, lacquers, polyurethanes, etc.

House Wall Identification Guide: The exterior wall that contains the front entry to the house is labeled as the A wall of the house. Proceeding clock-wise around the house label the remaining walls B, C, and D respectively. The interior room walls correspond to the exterior walls.

LEAD HAZARD EVALUATION METHODS

Visual Inspection: A visual evaluation of interior and exterior paint and surfaces in an effort to try to identify specific conditions that contributes to LBP hazards. A certified risk assessor or a Housing Quality Standards inspector trained in visual assessments should perform these inspections.

Paint Testing: Testing of specific surfaces that are coated with paint, by XRF (x-ray florescence) or lab analysis, to determine the lead content of these surfaces, performed by a certified LBP inspector or certified risk assessor

Risk Assessment: An on-site investigation to help determine the existence of LBP hazards. This can include paint testing, dust and soil sampling, water sampling and a visual inspection. The risk assessment report identifies lead hazards and potential options for lead hazard control. A certified risk assessor must conduct the assessment.

Clearance Examination: Clearance is performed after hazard reduction, rehabilitation, renovation, repair, modernization, or maintenance activities to determine if a unit is safe for occupancy. It involves a visual inspection, analysis of dust and soil samples, and preparation of a report. A certified risk assessor that is independent from the company or individual conducting the lead hazard control activities should conduct the clearance examination.

X-Ray Fluorescence Analyzer (XRF): This device, often called a XRF, is used to help identify levels of lead in paint without disturbing the painted surfaces themselves. The unit uses gamma radiation to measure the lead content in the paint on a per square centimeter basis. Users of this device must be specially trained and licensed as Lead Inspectors and be licensed by State radioactive material regulatory licensing agencies.

LEAD POISONING

Environmental Intervention Blood Lead Level (EIBLL): The level of lead in blood that requires intervention in a child under the age of seventy-two (72) months. This is typically defined as a blood lead level of 20 µg/dL (micrograms per deciliter) of whole blood or above for a single test, or blood levels of 15-19 in two tests taken at least three months apart.

KEY UNITS OF MEASUREMENT

µg (Microgram): A microgram is $1/1000^{th}$ of a milligram. To put this into perspective, a penny weighs 2 grams. To get a microgram, you would need to divide the penny into 2 million pieces. A microgram is one of those two million pieces.

µg/dL (microgram per deciliter): used to measure the level of lead in children's and worker's blood to establish whether intervention is needed. A deciliter is a little less than a half a cup.

µg/ft² (micrograms per square feet): the unit used to express levels of lead in dust samples. All reports should report levels of lead in dust in µg/ft².

mg/cm² (milligrams per centimeter square): used to report levels of lead in paint thru XRF testing.

PPM (parts per million): Typically used to express the concentrations of lead in soil. Can also be used to express the amount of lead in a surface coating on a mass concentration basis. This measurement can also be shown as: µg/g, mg/kg or mg/l.

PPB (parts per billion): Typically used to express the amount of lead found in drinking water. This measurement is also sometimes expressed as: µg/l.

EPA/HUD PUBLISHED LBP STANDARDS

<u>Dust-thresholds for Lead-Contamination</u>	
• Floors	Less than (<) 40 µg/ft²
• Interior Window Sills	<250 µg/ft²
• Window Troughs	<400 µg/ft²
<u>Soil-thresholds for Lead Contamination</u>	
• Play areas used by children 6 and under	<400 µg/gram or 400 parts per million (PPM)
• Other areas	<1200 µg/gram or 1200 parts per million (PPM)
• Threshold for abatement	<5000 µg/gram or 5000 parts per million (PPM)

THE FOLLOWING PUBLICATIONS AND RESOURCES CONTAIN ADDITIONAL INFORMATION ON LEAD AND LEAD HAZARDS:

NATIONAL CENTER FOR HEALTHY HOUSING:
www.leadsafehousing.org/

NATIONAL LEAD INFORMATION CENTER &CLEARINGHOUSE:
1-800-424 LEAD, Fax: 301-585-7976
www.epa.gov/lead/nlic.htm

NATION LEAD ABATEMENT AND ASSESSMENT COUNCIL:
1-800-590-6522 Fax: 301-924-0265
www.nllac.org

HUD'S OFFICE OF HEALTH HOMES AND LEAD HAZARD CONTROL:
www.hud.gov/offices/lead
Voice: 1-202-401-0388

THE ALLIANCE TO END CHILDHOOD LEAD POISONING:
www.aeclp.org/

THE ENVIRONMENTAL PROTECTION AGENCY LEAD PROGRAMS:
www.epa.gov/opptintr/lead
Voice: 1-202-260-2090

ANYSTATE DEPARTMENT OF HEALTH AND ENVIRONMENT, LEAD POISONING PREVENTION PROGRAM
www.depthealth..state.as.us/lead/

ADDITIONAL INFORMATION:
Lists of recalled products containing lead: www.safetyalerts.com
The Lead listing – for info on lead-related service providers and EPA accredited laboratories throughout the United States: www.leadlisting.org

This Work Write Up was developed for a fictional property. All specification language and costs are for discussion purposes only.

Work Item List Cover Sheet

Property Address: 123 Olympic Street

Owners: Susan and Bill Jones

Phone No: (111) 222-3333

Original Cost Estimate completed by: Bruce Smith Date: October 4, 2001

Total Initial Estimate:$10,092.55

Modifications completed by: Bruce Smith Date: October 18, 2001

Total Final Estimate: $14,210.20

Explanation for Modifications: *Integrated results of risk assessment*

Date Bids Sent To Contractors:_____

Bid Opening Date:_____

Bids Returned by:	Amount
1. _____	_____
2. _____	_____
3. _____	_____

Rehab Specialist:_____

Witnessed by:_____

Owner's Acceptance: _____ Date:_____

WORK WRITE-UP FOR
123 OLYMPIC STREET
COOLSVILLE, ANY STATE 12345

PREPARED BY: Bruce Smith
DATE: OCTOBER 18, 2001

SPECIFICATIONS BY LOCATION

Spec Number	Spec	Quantity	Units	Unit Price	Total Price
	GENERAL REQUIREMENTS				
0031.1	CONSTRUCTION DEFINITIONS "Install" means to purchase, set up, test and warrant a new component. "Replace" means to remove and dispose of original material, purchase new material, deliver, install, test and warrant. "Repair" means to return a building component to like new condition through replacement, adjustment and recoating of parts. "Reinstall" means to remove, clean, store and install a component.	1.00	GR	0.00	0.00
0035.1	VERIFY QUANTITIES/MEASUREMENTS All measurements (i.e. SF of Drywall, or those provided with drawings) are for the contractor's convenience prior to a mandatory site inspection to verify all dimensions. All quantities (i.e. number of window units) are as stated. No claim for additional funds due to discrepancies in measurements or quantities shall be honored if not submitted at the time of the initial proposal.	1.00	GR	0.00	0.00
0039.1	HVAC PERMIT REQUIRED Prior to the start of the heating/cooling work, the contractor shall create a heating distribution layout and perform heat/cooling loss calculations and all other documentation needed to apply for, pay for and receive an HVAC permit on behalf of the owner.	1.00	EA	0.00	0.00

0077.1	NEW MATERIALS REQUIRED All materials used in connection with this work write-up are to be new, of first quality and without defects – unless stated otherwise or pre-approved by Owner and Construction Specialist.	1.00	GR	0.00	0.00	
0090.1	1 YEAR GENERAL WARRANTY Contractor shall remedy any defect due to faulty material or workmanship and pay for all damage to other work resulting therefrom, which appear within one year from final payment. Further, contractor shall furnish owner with all manufacturers' and suppliers' written warranties covering items furnished under this contract prior to the release of the final payment.	1.00	DU	0.00	0.00	
9000	LEAD SAFE WORK PRACTICES On all work items flagged as "interim controls" or as requiring "lead safe work practices", workers must use lead safe work practices per 24 CFR 35.1350. These practices are represented in the "Lead Safety Field Guide" (*Lead Paint Safety: A Field Guide for Painting, Home Maintenance, and Renovation Work)* published by HUD, EPA, and DCD as HUD Publication #HUD-1779-LHC, March 2001 or any HUD-approved Lead Safe Work Practices class. Work disturbing lead-based paint is not considered complete until clearance, if required, is achieved.					$0
9057	WORKER TRAINING – INTERIM CONTROLS All persons carrying out activities flagged as "interim controls" or as requiring "lead safe work practices" must either be supervised by an EPA abatement supervisor or provide proof of completion of HUD-approved worker training course in lead safe work practices prior to start of work.					$0
9090	TEMPORARY RELOCATION All occupants must be out of the work area while work items flagged as "interim controls" or as					$0

	requiring "lead safe work practices" are underway. Children and women of childbearing age are specifically prohibited from entering the dwelling at any time during the reduction process, including times when work is not in progress. Provide moving and packing services to and from temporary housing unit. Pay all utility hook-up fees for both moves as well as daily rental costs.				
9122	GROUND CONTAINMENT During the period of work on exterior windows and porch, maintain ground containment. Attach two layers of 12' wide 6 mil polyethylene to the building perimeter with staples or furring strips extending 10' past work station. Construction a worksite perimeter curb of 4 x 4 timbers wrapped under the containment. Create an outer barrier of flags or plastic tape 3' on center, 20' from work site. Close and lock all windows and doors on work site elevation. Remove and replace daily.	6	DY	$65.00	$390.00
9133	PRE-CLEAN Before any rehabilitation or interim controls activities begin, the structure and site must be inspected and pre-cleaned following HUD specified cleaning protocols, as detailed in the Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision), published by the U.S. Department of Housing and Urban Development. Some of the required steps include removing large debris and paint chips followed by HEPA vacuuming of all horizontal surfaces (floors, windowsills, troughs, etc.). The cleaning protocols described in this publication can assist the contractor in doing a preliminary cleaning and improving the chances of passing clearance inspections after remediation.	1200	SF	.75	$900.00
9129	FINAL CLEAN After completion of all rehabilitation using safe work practices and interim controls perform a final clean. Wet mist, fold and remove all containment plastic. Remove plastic from floors last. HEPA vacuum all visible surfaces including	1200	SF	.75	$900.00

	clothing, furniture, walls, floors and ceilings from the top down. Detergent scrub all horizontal surfaces in small sections using a 3-bucket cleaning system. Completely rinse with clean water and new supplies. After surface is dry, HEPA vacuum all visible surfaces except ceiling.				
9030	CLEARANCE EXAMINATION After completion of all work that disturbed LBP and any other lead hazard reduction activities, a qualified person shall perform a clearance examination in accordance with 24 CFR Part 35, including visual inspection and dust wipe samples. The clearance examiner must be independent from the contractor performing the work.	1	EA	$275.00	$275.00
	EXTERIOR				
3185.2	FRONT DOOR – PREHUNG METAL ENTRANCE Dispose of door and frame. Install a prehung metal, insulated, 4-panel entrance door and jamb including interior and exterior casing, spring metal weatherstripping, interlocking threshold, wide angle peepsight, one entrance and one mortised deadbolt keyed alike. Prime and top coat. **Lead-based paint is present on door and casing. Use Lead Safe Work Practices as described in Spec #9000 above.**	1.00	EA	450.00	450.00
9156	SCRAPE AND REPAINT WINDOW COMPONENTS AND TRIM: **INTERIM CONTROLS** - STABILIZATION: Mist affected painted areas with water. Scrape all loose paint. Feather edges with a sponge sanding block. Saturate with de-glossing agent. Rinse and HEPA-vacuum small visible chips. Allow surface to dry, spot prime, and topcoat with premium acrylic latex paint from a single manufacturer. Color to be determined by the owner.	15	EA	70.00	1050.00

	ROOFING				
4580.1	TEAR OFF AND REROOF SHINGLES Remove and dispose of all roofing & defective sheathing. Cut a 1" wide vent at ridge board. Replace up to 5 sf of sheathing per 100 sf of roof using pine board or CDX plywood of matching thickness. Staple 15 lb felt. Install preformed aluminum, drip edge, and vent pipe boots. Install a 220 lb fiberglass asphalt, 3 tab shingle with a 25 year warranty. Replace all flashing. Install shingle-over ridge vent.	12	SQ	145.00	1,740.00
4755.3	REPAIR FASCIA 1" X 6" Install a 1" x 6", #2 pine fascia with bevel cut joints using galvanized finish nails. Caulk over joints, and prime. **Lead based paint is present on fascia. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	LF	5.00	5.00
	PORCH				
5685.2	PREP & PAINT PORCH Scrape all loose, peeling, cracked, blistered paint from porch, including floor, railing, ceiling, posts and trim. Feather edges and dull gloss by sanding. Rinse entire area with water. Let dry. Caulk all cracks. Spot prime and top coat with owner's choice of premixed acrylic latex. **Lead based paint is present on most porch surfaces. Use Lead Safe Work Practices as described in Spec #9000 above.**	375	SF	1.00	375.00
3525.2	GUARD RAIL – WOOD Dispose of any existing railing. Construct a preservative treated pine railing using 2" x 4" top and bottom rails, and 2" x 2" balusters face nailed 6" on center. Create a 3'6" high railing between 4" x 4" end posts. **Lead based paint is present on railing, column, wall, and posts. Use Lead Safe Work Practices as described in Spec #9000 above.**	24	LF	15.00	360.00
3585.2	TREAD REPLACEMENT – EXTERIOR Dispose of damaged tread. Install 1-5/8" preservative treated pine stepping stock with	3	EA	22.00	66.00

	screw shank nails. **Lead based paint is present on porch floor. Use Lead Safe Work Practices as described in Spec #9000 above.**				
3875.2	HOUSE NUMBER SET Install 3" high metal or PVC house numbers on a 1" x 4" pine backer board painted with 2 coats of exterior white latex paint on siding to right of the door. **Lead based paint is present on siding. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	EA	42.00	42.00
FURNACE ROOM					
6050.1	FURNACE & DUCT – GAS: 80,000 BTU Install 80,000 BTU intermit. pilot, forced air furnace complete with plenum, insulated supply duct, galvanized return duct connected to wall registers, to service all rooms. Include setback thermostat, filter, fan and plenum control. Connect thimble breaching to chimney per code. Provide separate power circuit & operating manual. System to maintain 70 F indoor temp when outside temp is –10 F. Min AFUE rating of 86.	1	EA	4,210.00	4,210.00
5210.1	DRYWALL – PATCH – LARGE Cut back defective gypsum to expose half of the studs on each side of the hole. Cut and tightly fit drywall patch. Glue and nail or screw patch. Apply tape and 3 coats of compound feathered out at least 8". Wet sand ready for paint.	36	SF	5.00	180.00
	KITCHEN				
7595.2	RECEPTACLE – GFCI COUNTERTOP Install a flush mounted, ground fault circuit interrupted, ivory, duplex receptacle and ivory cover plate using #14 copper romex. Fish wire and repair all tear out. **Lead based paint is present on the wall. Use Lead Safe Work Practices as described in Spec #9000 above.**	3	EA	100.00	300.00
7835.2	RANGE HOOD EXTERIOR VENTED	1	EA	275.00	275.00

	Install an exterior ducted enameled range hood with integral controls and light capable of 100 cfm at 70 somes. Attach hood cabinet with screws. Include metal vent and roof or wall cap/damper assembly, using #14 copper romex. Owner's choice of color. **Lead-based paint is present on the wall. Use Lead Safe Work Practices as described in Spec #9000 above.**				
5490.2	PREP & PAINT WALLS – SEMI-GLOSS Remove/cover hardware, fixtures, accessories not to be painted. Scrape loose, peeling, cracked and blistered areas. Clean oil, grease, fungus, dirt and dust from surfaces. Fill holes and cracks. Prime all new materials and spot prime existing with acrylic latex primer. Top coat with owner's choice of premixed acrylic latex. Replace or uncover hardware, fixtures and accessories. **Lead based paint is present on the walls. Use Lead Safe Work Practices as described in Spec #9000 above.**	520	SF	0.62	322.40
	BATH				
9100.1	REMOVAL OF DUST LEAD HAZARD AND STABILIZATION **(INTERIM CONTROLS)** An existing dust-lead hazard on the bathroom floor must be removed prior to any other rehabilitation activities in this room. This room must be carefully inspected and cleaned following HUD-specified cleaning protocols. As the area is prepared for replacement of the plumbing fixtures and repainting, lead-safe work practices must be used. All of the required procedures for control and containment of dust to this room must be used. Any work that will disturb these surfaces must be carried out by properly trained lead workers. Following preparation work, the lead-based paint coatings on the bathroom walls may be addressed by stabilizing the surfaces with new paint. This activity has the potential to create a high volume of lead-contaminated dust, and extra	1	EA	50.00	50.00

	care must be taken by the contractor to limit and contain the dust generated.				
4150.2	TUB END WALL Frame a 2" x 4" wide partition at tub end for full ceiling height. Provide blocking for a showerhead fitting and a 2' x 2' access panel. Hang water resistant drywall, tape and finish with 3 coats of compound. Use metal corner bead around access panel opening. Make stops for access panel and use 4 round-headed screws to install panel of 1/2" BCX plywood with smooth, sanded edges. **Lead based paint is present on the wall, baseboard and shoe molding. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	EA	228.00	228.00
3680.2	TUB SURROUND – PREFAB Install a white fiberglass or acrylic, 3 or 5 piece tub surround kit with a built-in soap dish. Caulk all joints with white, mildew resistant, siliconized caulk. Prepare substrate and attach panels using manufacturer's recommended adhesive and fasteners. **Lead based paint is present on the wall. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	EA	265.00	265.00
5560.2	PREP & PAINT BATHROOM WALLS Remove/cover all hardware and fixtures not to be painted. Wet scrape all loose cracked, peeling, blistered surfaces. Clean surfaces with household detergent. Fill all holes and cracks. Spot prime with acrylic latex. Apply top coat of owner's choice of premixed acrylic latex semi-gloss. **Lead based paint is present on the walls. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	RM	120.00	120.00
5930.2	UNDERLAY AND VINYL TILE Install 5/16" underlayment grade plywood using 7d screw shank or cement coated nails, 6" on center allowing a 1/4" gap at wall. Lay 12" x12"x1/8" vinyl composition tile, color group B as made by Armstrong or Azrock, per	36	SF	3.45	124.20

	manufacturer's recommendations. Square to room axis. Include metal edge strips at openings, and shoe molding or 4" vinyl base around perimeter. Owner's choice of in-stock color. **Lead based paint is present on the baseboard and shoe molding. Use Lead Safe Work Practices as described in Spec #9000 above.**				
6945.2	BATHTUB – 5' STEEL COMPLETE Install a 5' white, enameled, formed steel, tub complete with lever operated pop up drain and overflow, PVC waste, molded base, metal two handle shower diverter, shower rod and Delta 6122 shower head. **Lead based paint is present on the wall. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	EA	595.00	595.00
	SOUTHWEST BEDROOM				
3260.2	REWORK INTERIOR DOOR - ENTRANCE DOOR Rehang door. Adjust door and lockset to operate properly. If door rubs carpeting, trim bottom of door to clear carpeting. **Lead based paint is present on door and casing. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	EA	50.00	50.00
5495.2	PREP & PAINT INTERIOR TRIM Remove or cover hardware/surfaces not to be painted. Wet scrape loose, cracked, peeling and blistered paint from all trim including doors, sash, and radiators. Feather edges and dull gloss with wet sanding. Clean oil, grease, dirt and dust from trim. Fill holes and caulk cracks. Spot prime. Apply one top coat of acrylic latex enamel. Finish type and color choice of owner. **Lead based paint is present on the trim. Use Lead Safe Work Practices as described in Spec #9000 above.**	1	RM	78.00	78.00
	MASTER BEDROOM				
4010.1	CLOSET POLE	1	EA	24.00	24.00

	Field measure and install 1-1/2" diameter wood closet pole and sockets.				
4015.1	CLOSET SHELF Install 1" x 12" closet shelf of #2 grade pine or B/C plywood, from wall to wall, supported on three sides by hood strip. If more than 4' span, use center support bracket. If plywood, fill all cracks, holes and front edge cuts with putty, and sand smooth.	3	LF	6.00	18.00
2410.1	BASEBOARD – 1" X 4" Install 1" x 4", #2 grade pine base with finish nails or tee headed brads.	56	LF	2.10	117.60
5235.1	LAMINATE 3/8" DRYWALL – WALLS & CEILING Hang 3/8" gypsum over wall or ceiling surface with screws 8" on center and a bead of construction adhesive 20" on center. Butt drywall to door and window casing and apply J channel molding. Remove top molding from 3-piece base and reinstall after surface is paint-ready. Tape, 3-coat finish and sand ready for paint.	560	SF	1.25	700.00
5565.1	PREP & PAINT BEDROOM Remove/cover all hardware, fixtures not to be painted. Wet scrape loose, cracked, peeling, blistered surfaces. Feather edges and dull gloss surfaces with sandpaper. Clean all surfaces with household detergent. Spot prime and top coat trim, ceiling, walls, doors and windows with owner's choice of premixed acrylic latex. Include any closets.	1	EA	150.00	150.00